

Replacement Sheet

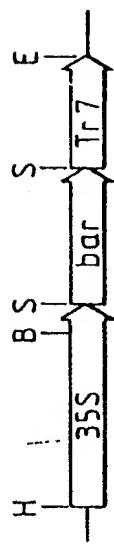


FIG. 1A

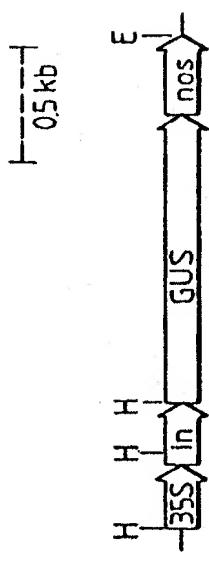


FIG. 1B

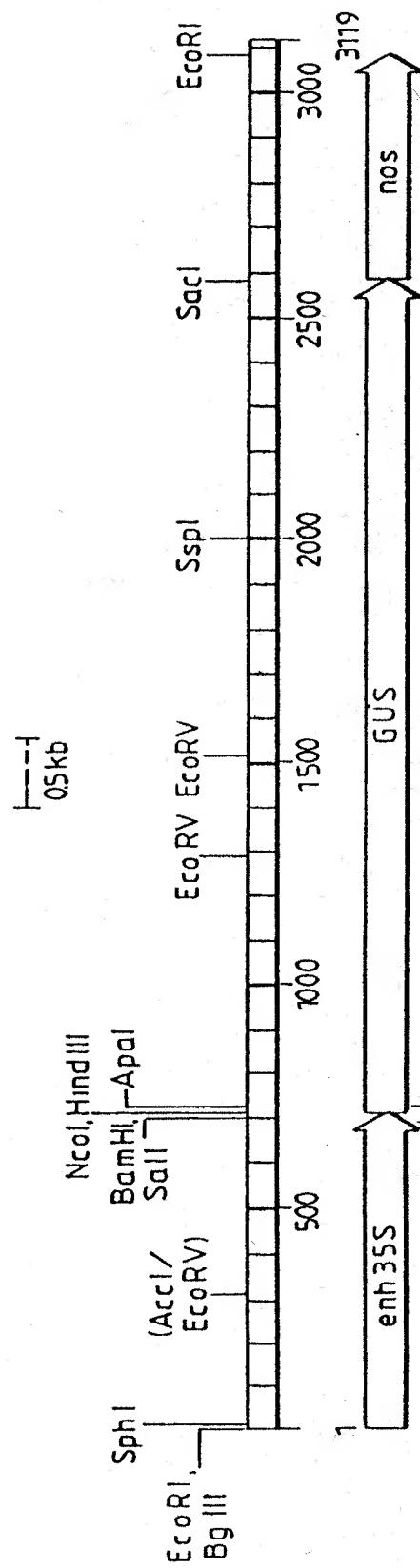


FIG. 1E

pAGUS1 (pDPG141)...GAGGATCCGTCGACCA[ATG]GTAAGCTTAGCCGGCC...  
Bam HI Sall Nco I Hind III Apal

pAGUS1 (pDPG141)...GAGGATCCGTCGACCA[ATG]GTAAGCTTAGCCGGCC...

Replacement Sheet

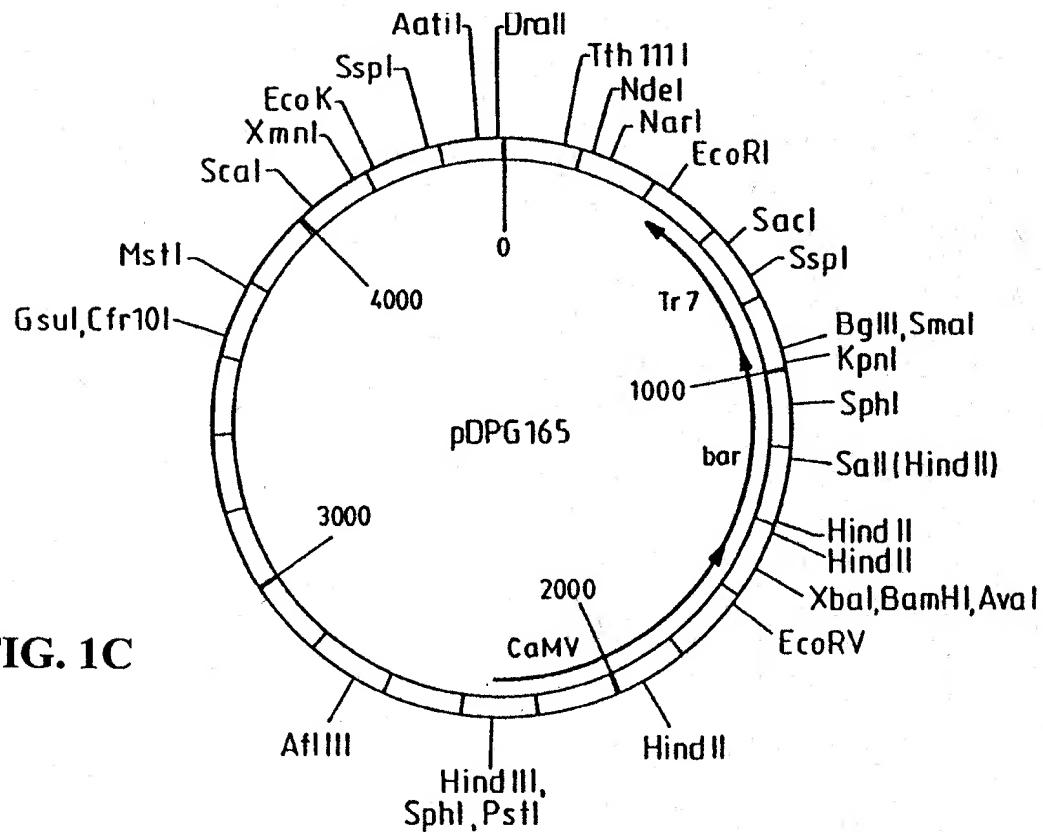


FIG. 1C

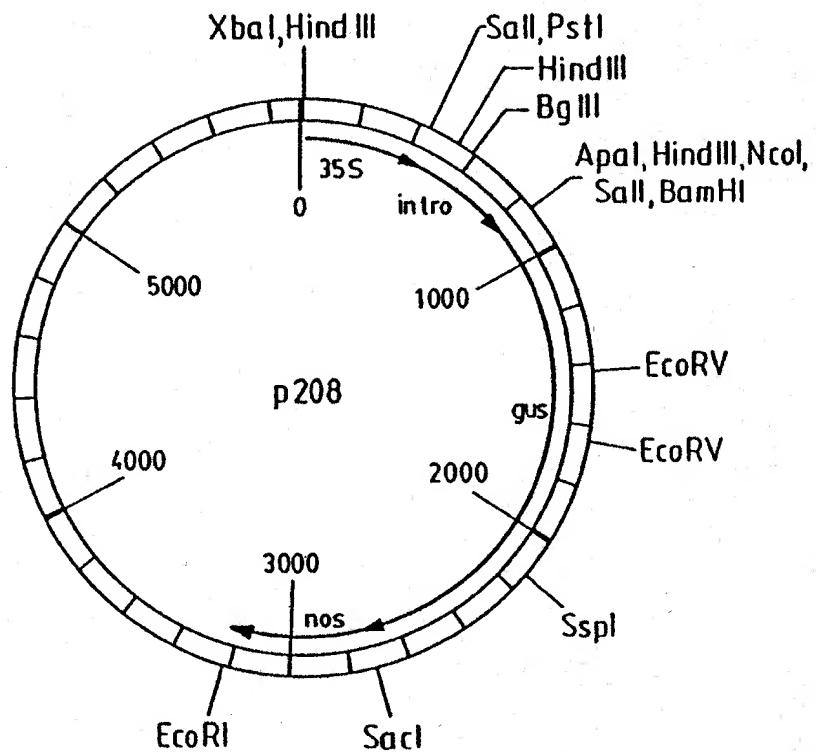
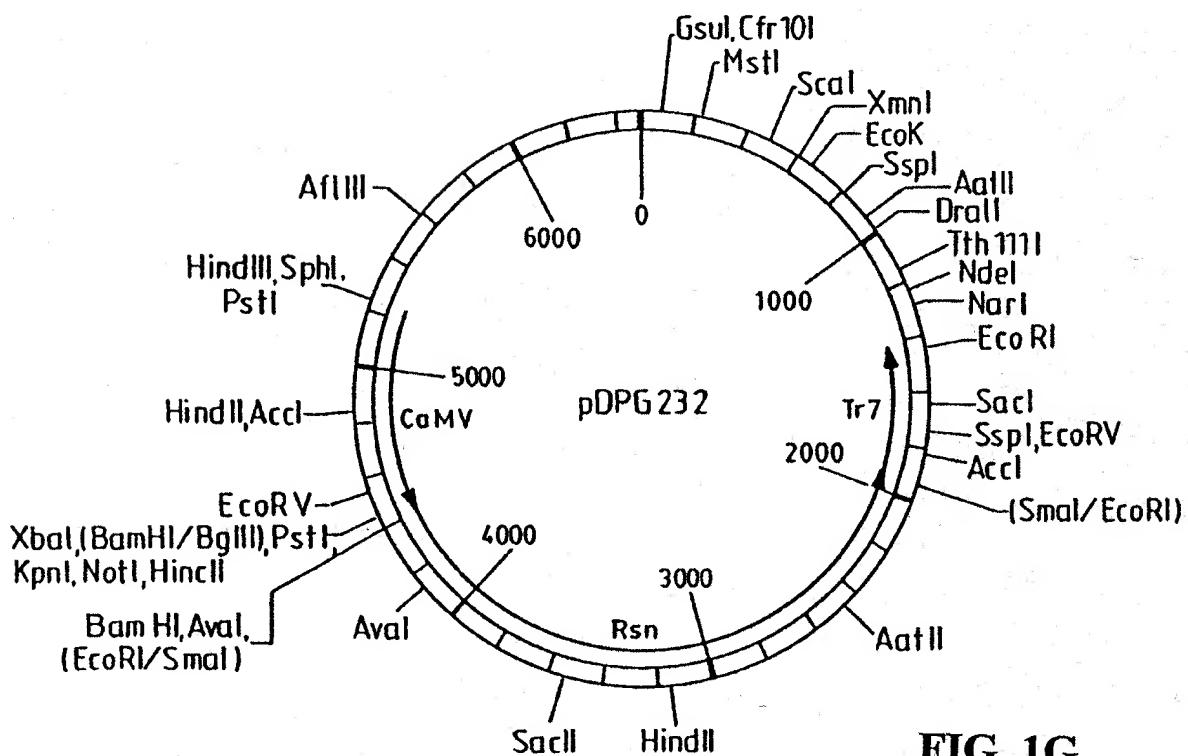
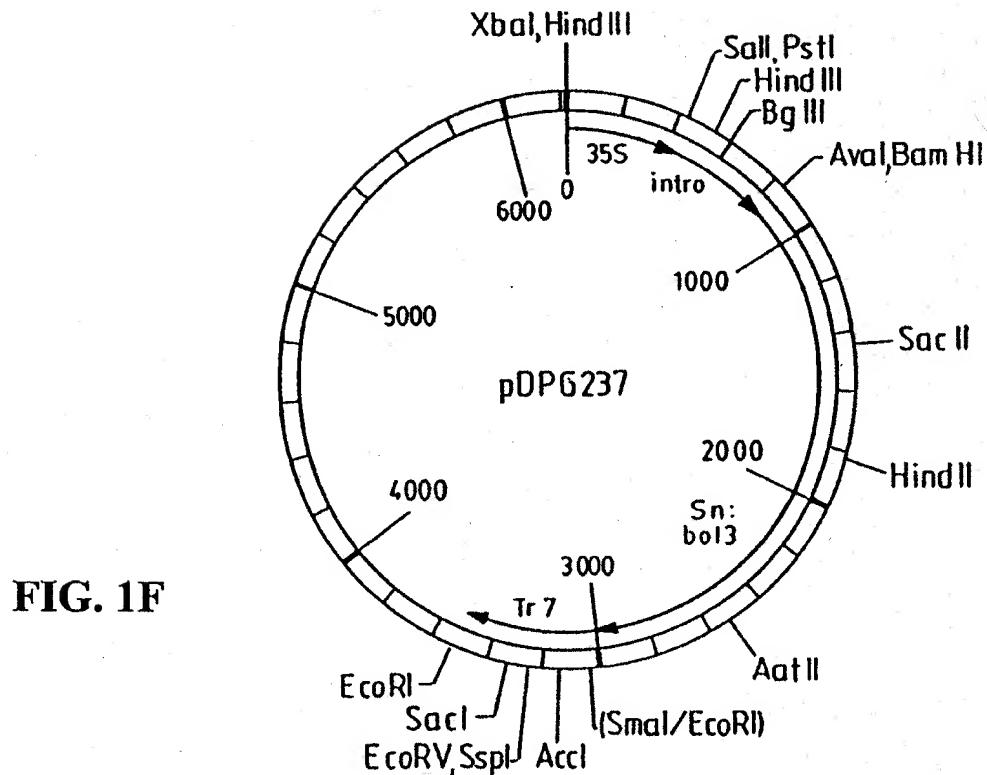


FIG. 1D

Replacement Sheet



Replacement Sheet

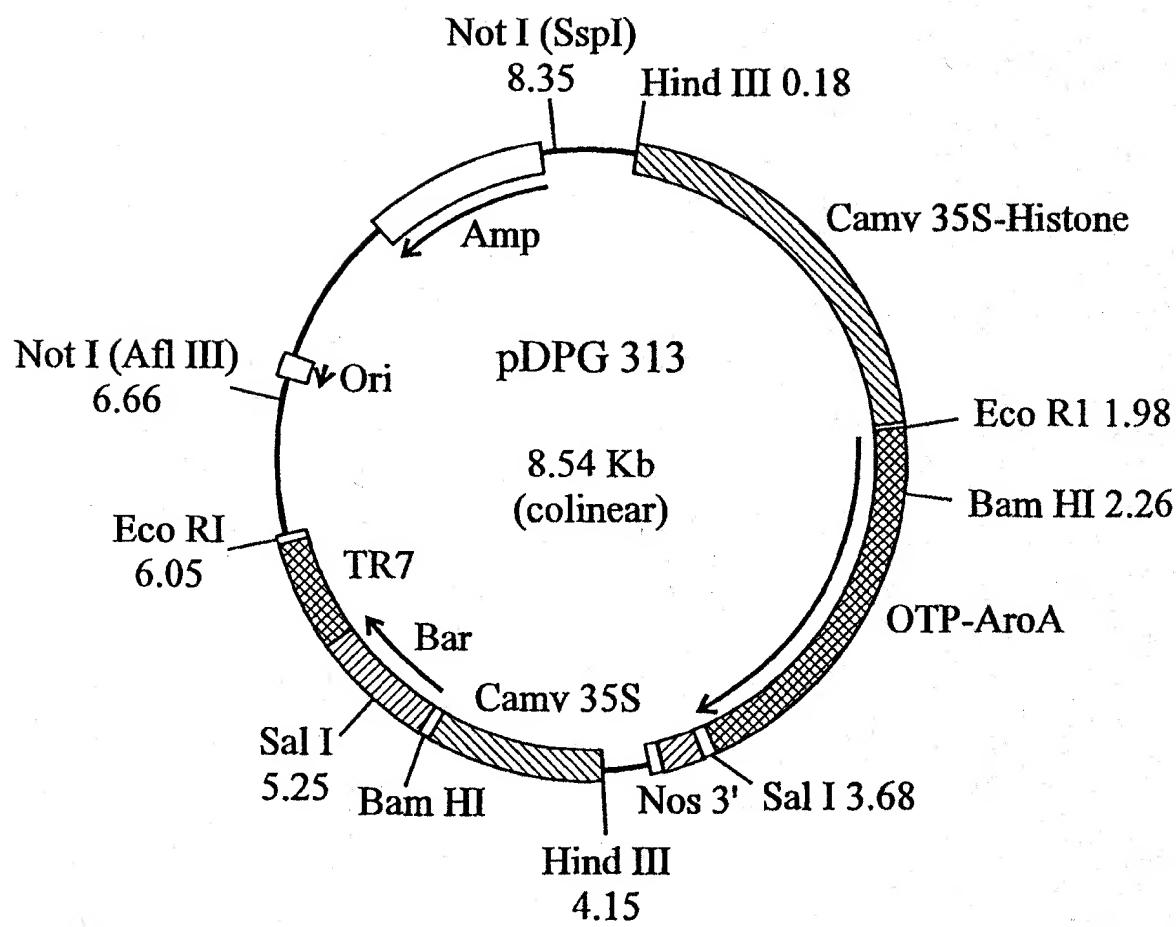


FIG. 1H

Replacement Sheet

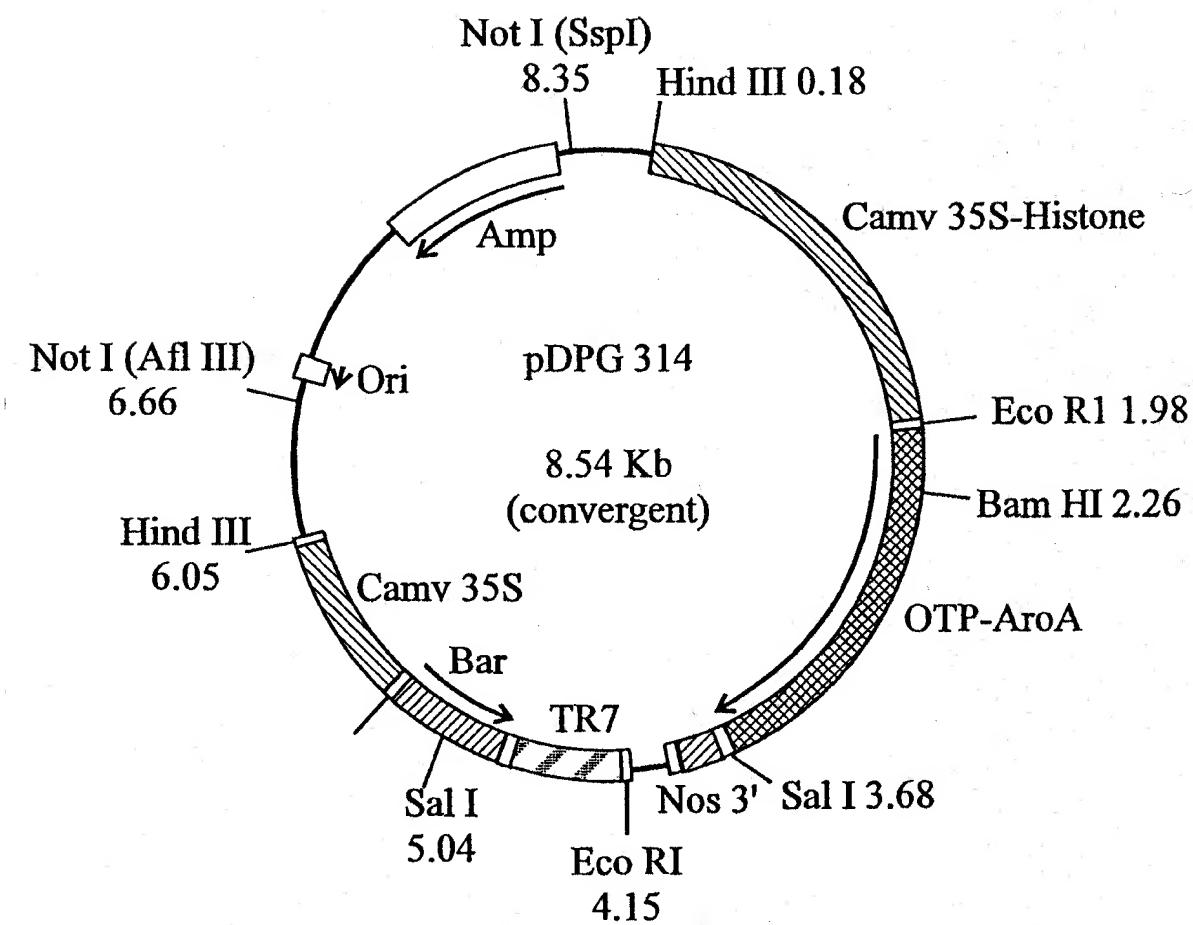
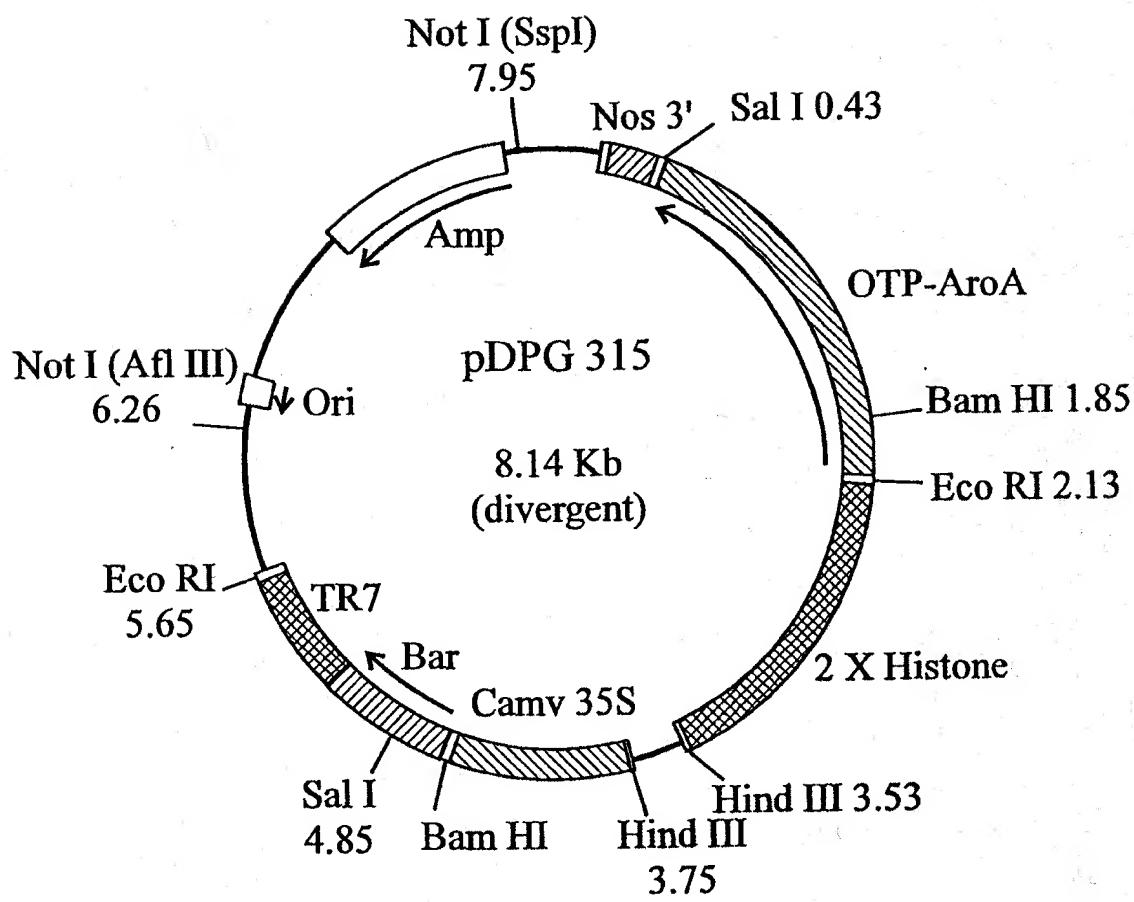


FIG. 1I

Replacement Sheet



**FIG. 1J**

Replacement Sheet

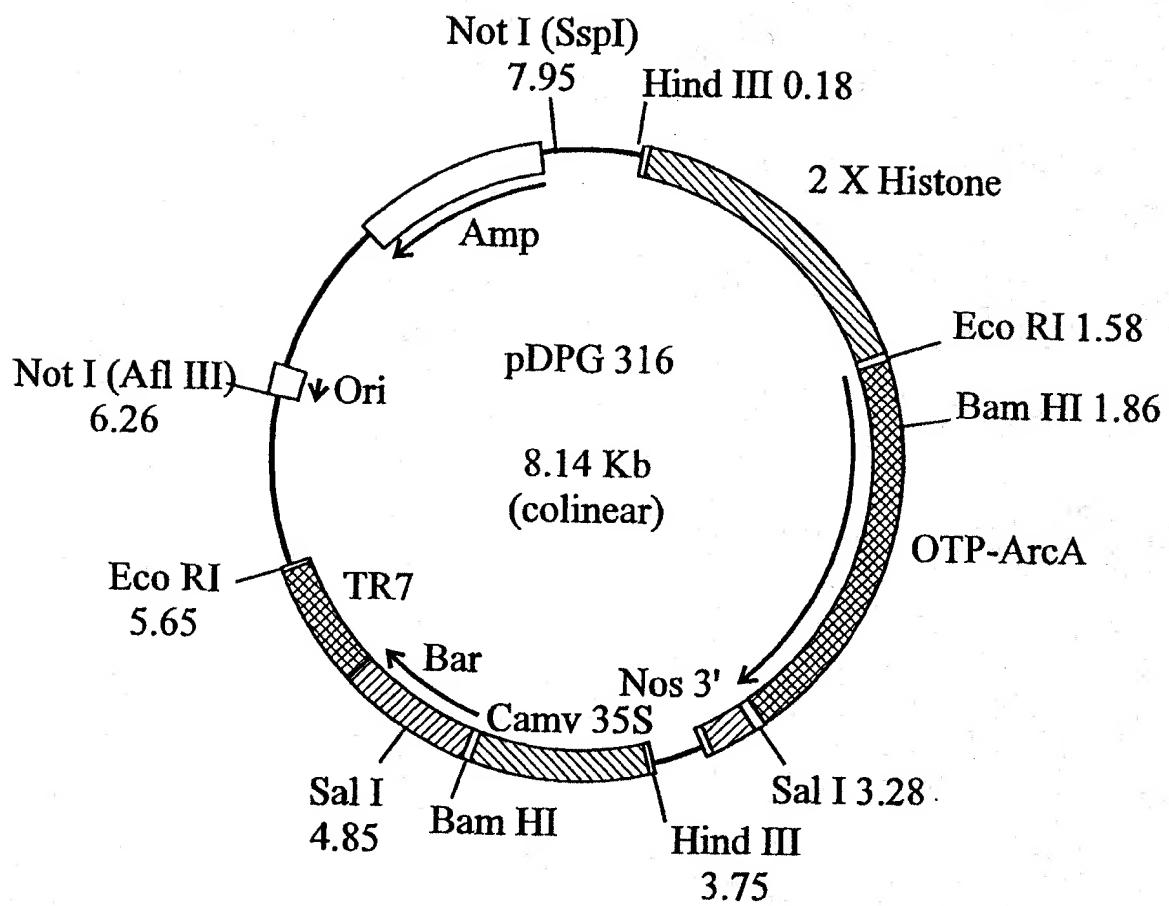


FIG. 1K

Replacement Sheet

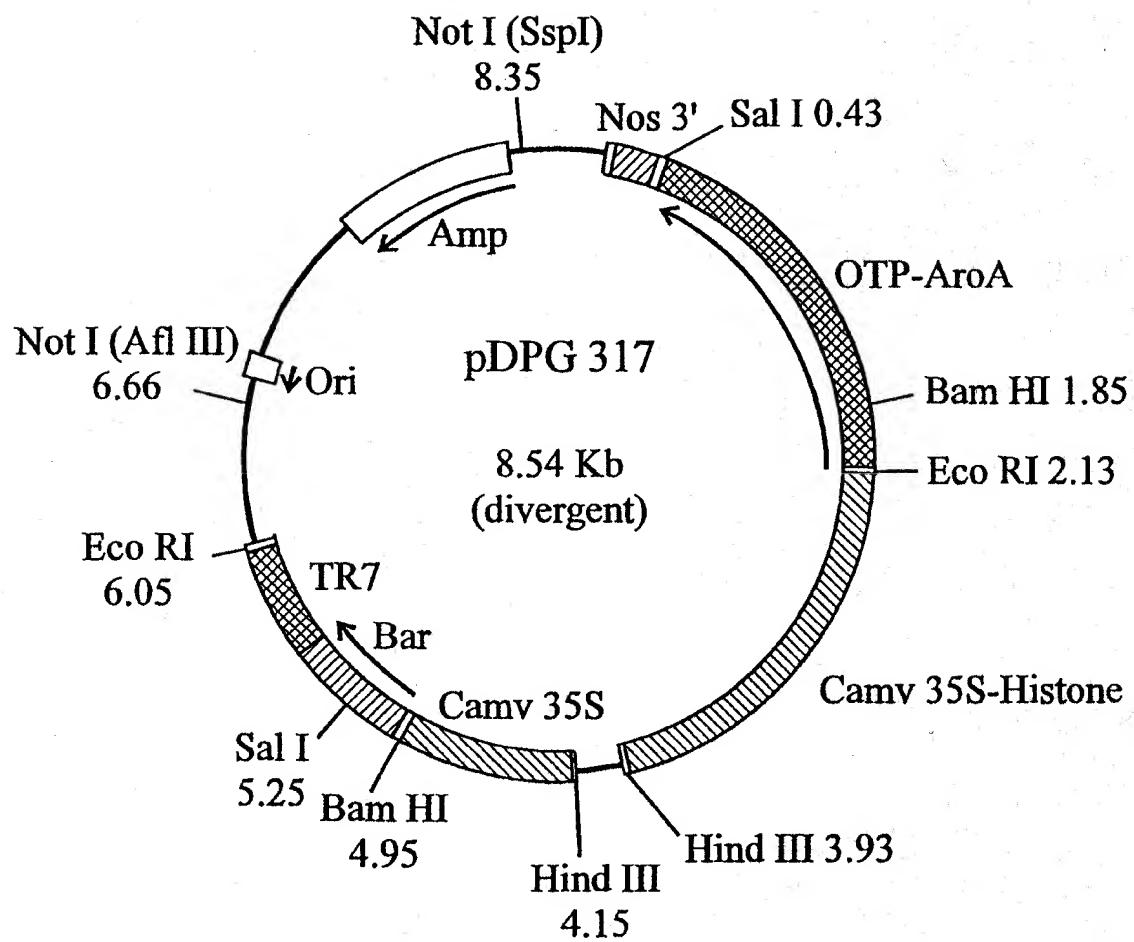


FIG. 1L

Replacement Sheet

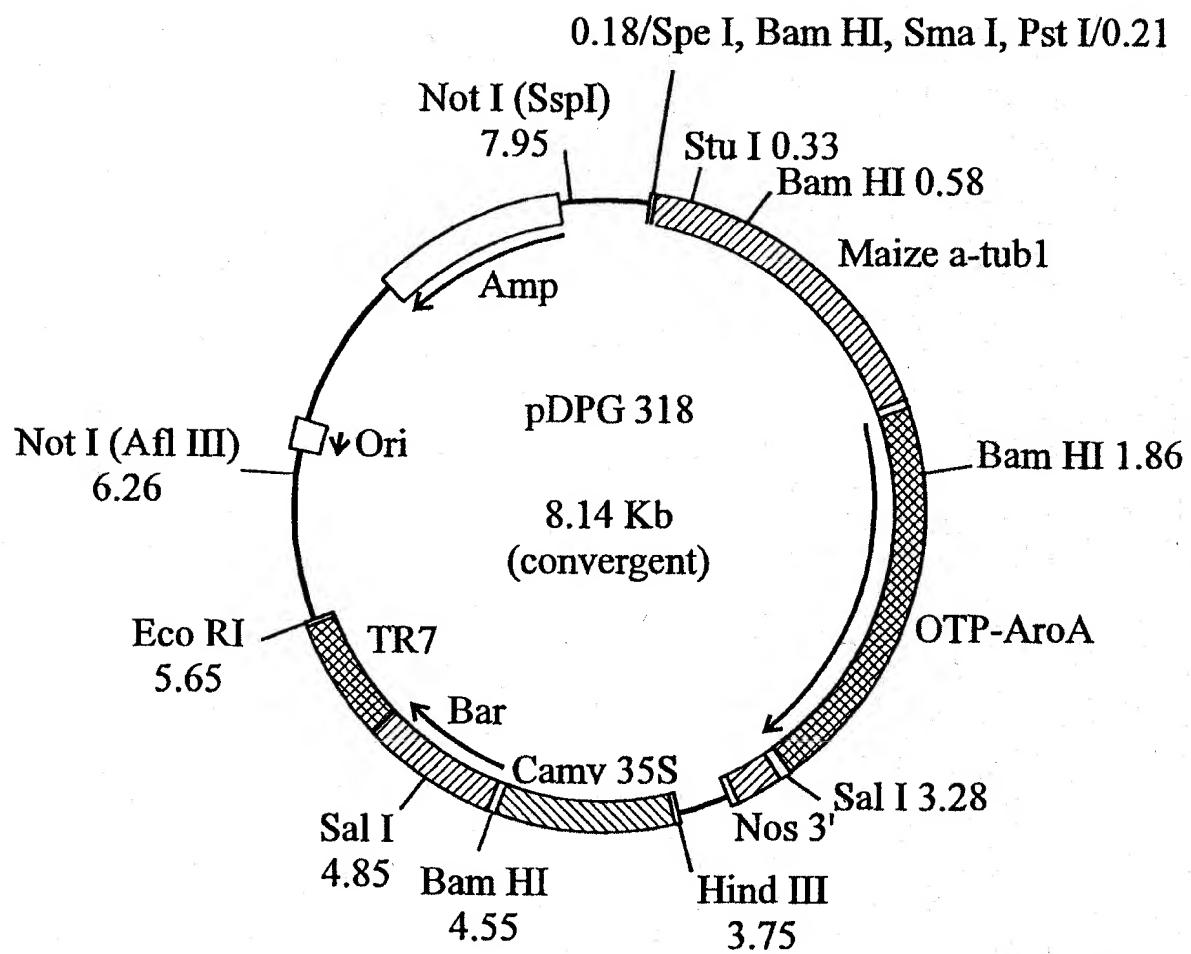


FIG. 1M

Replacement Sheet

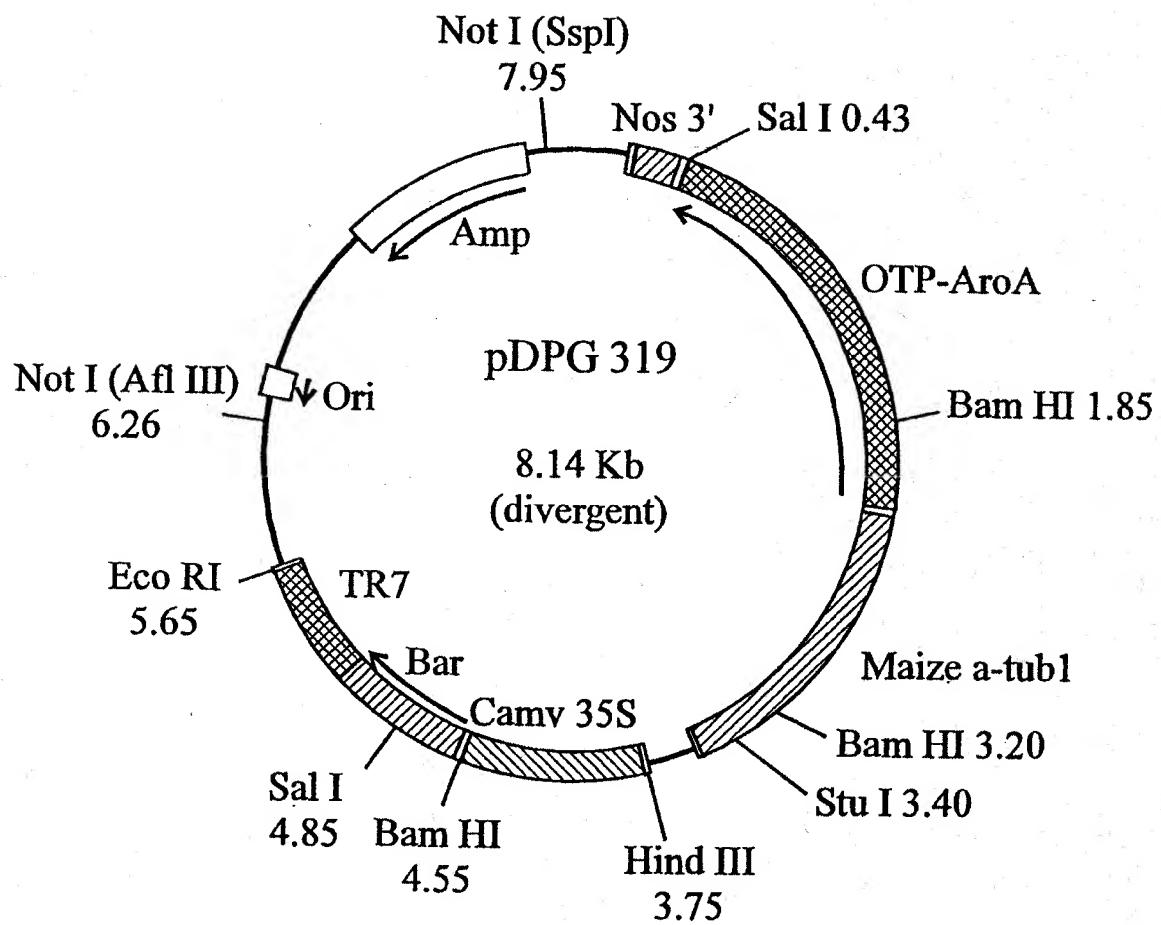


FIG. 1N

Replacement Sheet

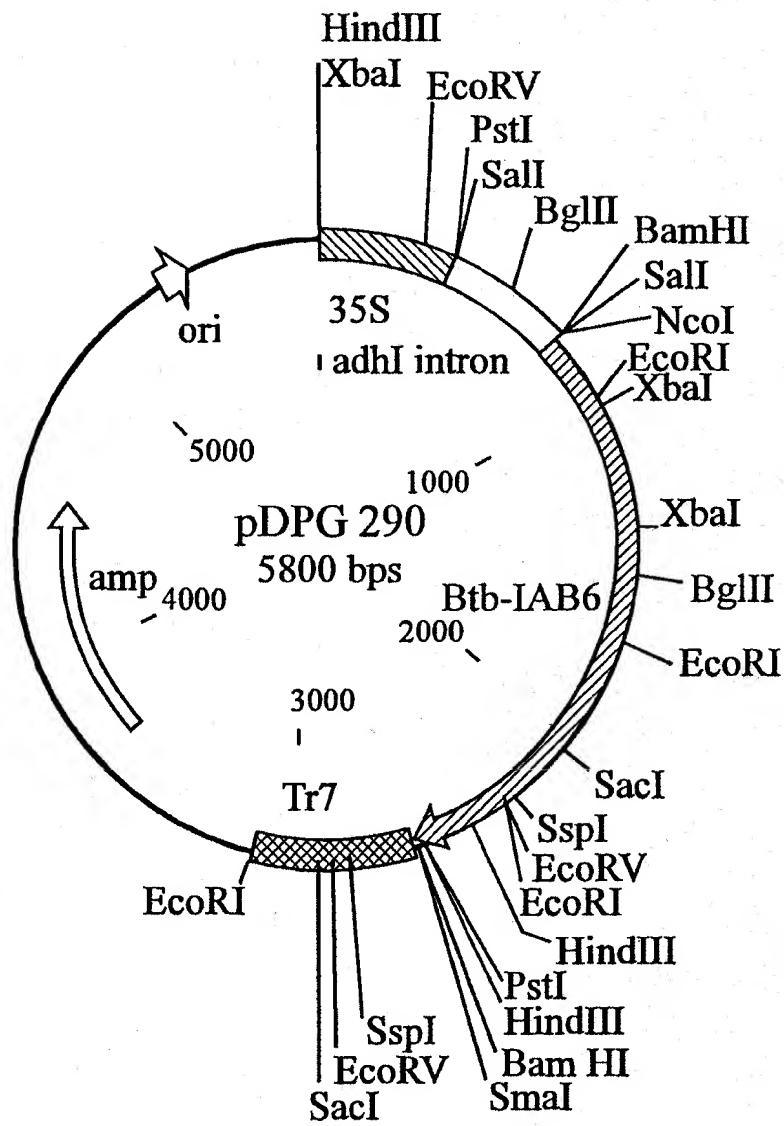


FIG. 1O

Replacement Sheet

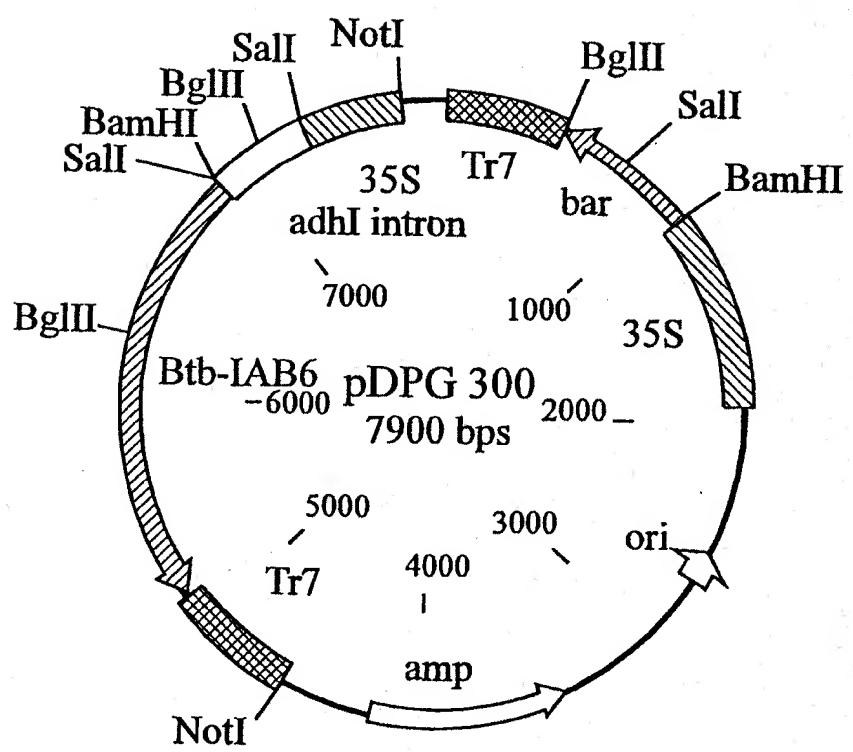


FIG. 1P

Replacement Sheet

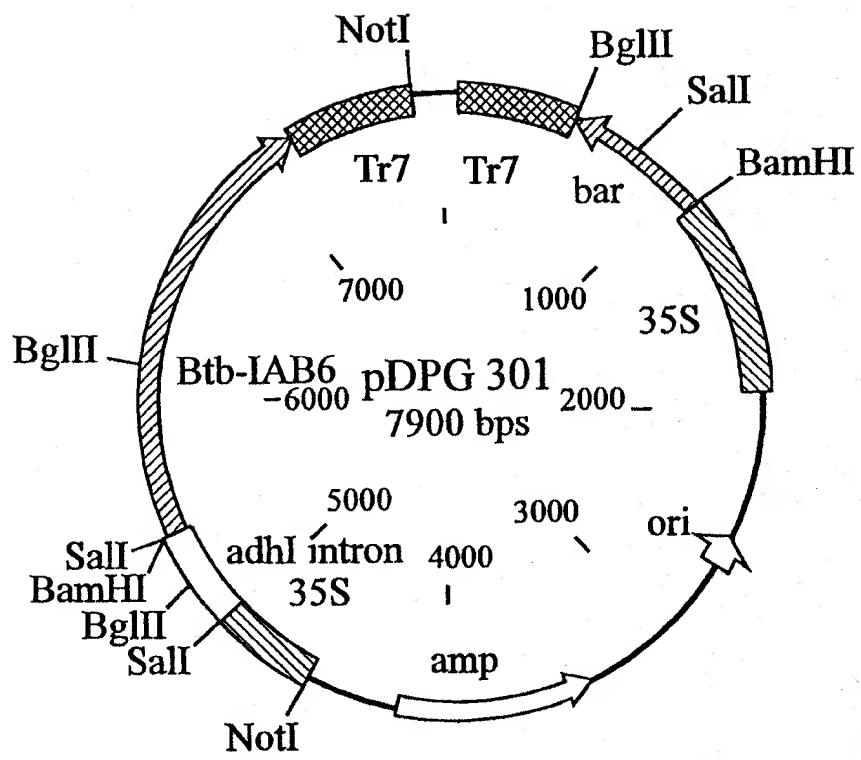
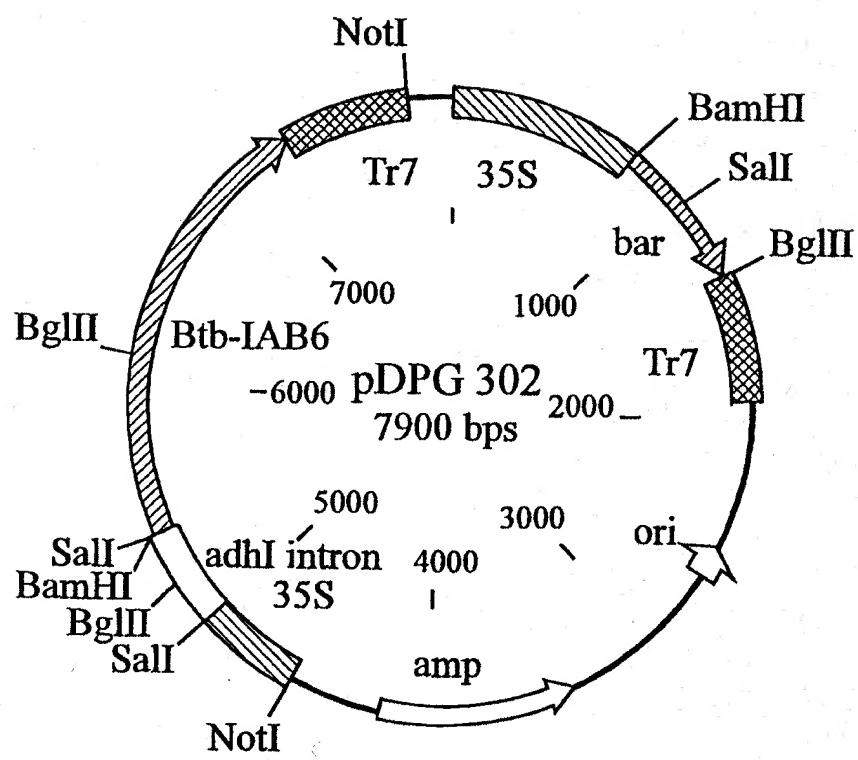


FIG. 1Q

Replacement Sheet



**FIG. 1R**

Replacement Sheet

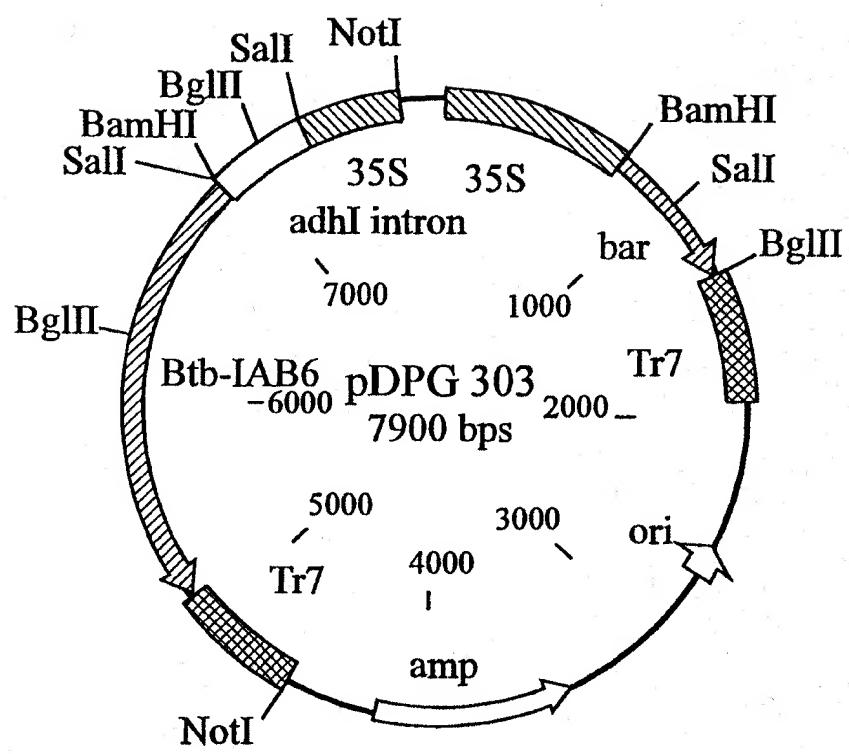


FIG. 1S

Replacement Sheet

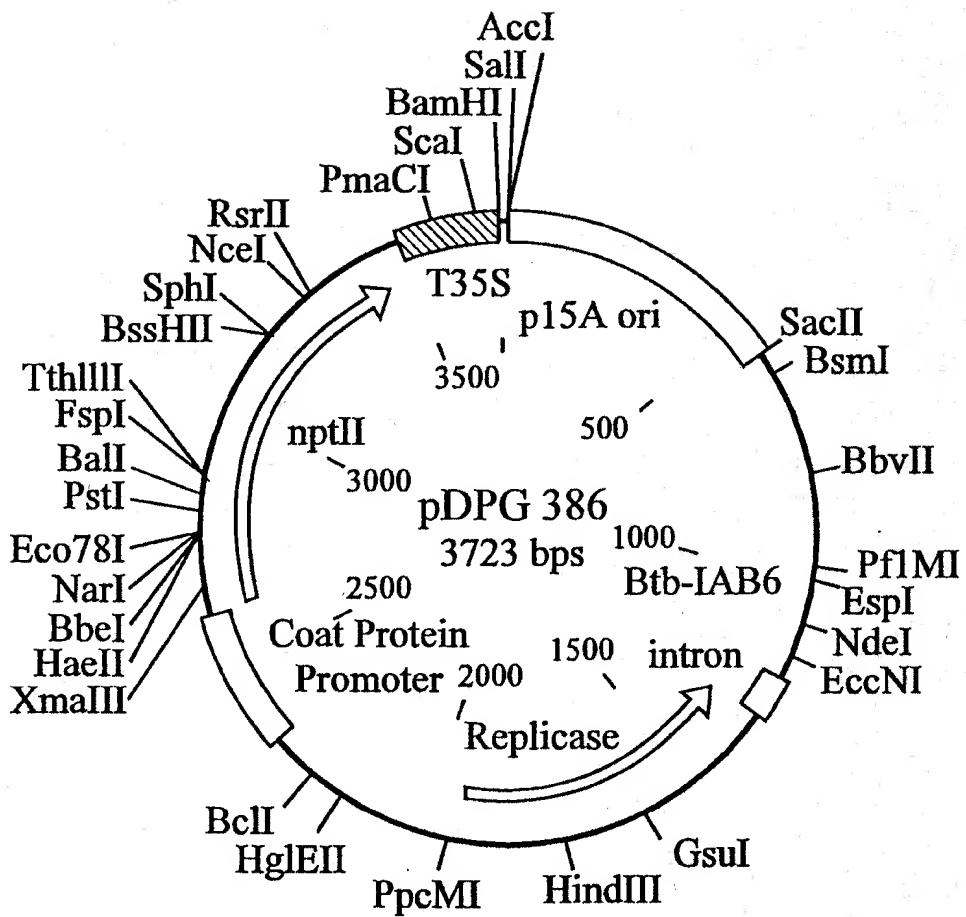


FIG. 1T

## Replacement Sheet

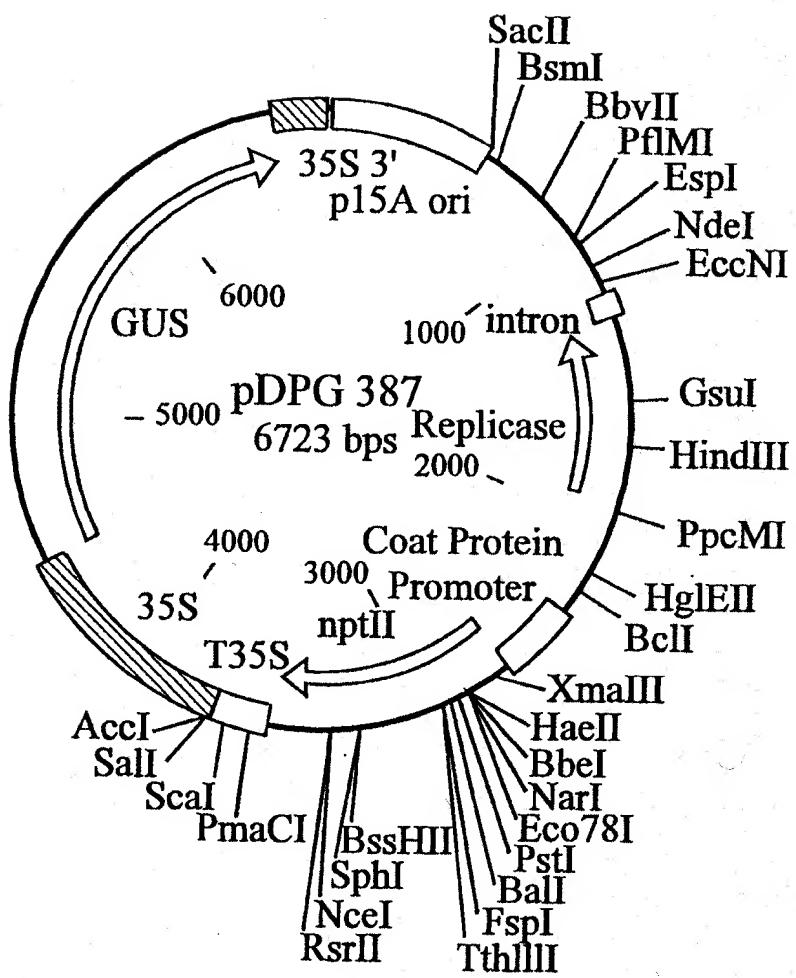


FIG. 1U

Replacement Sheet

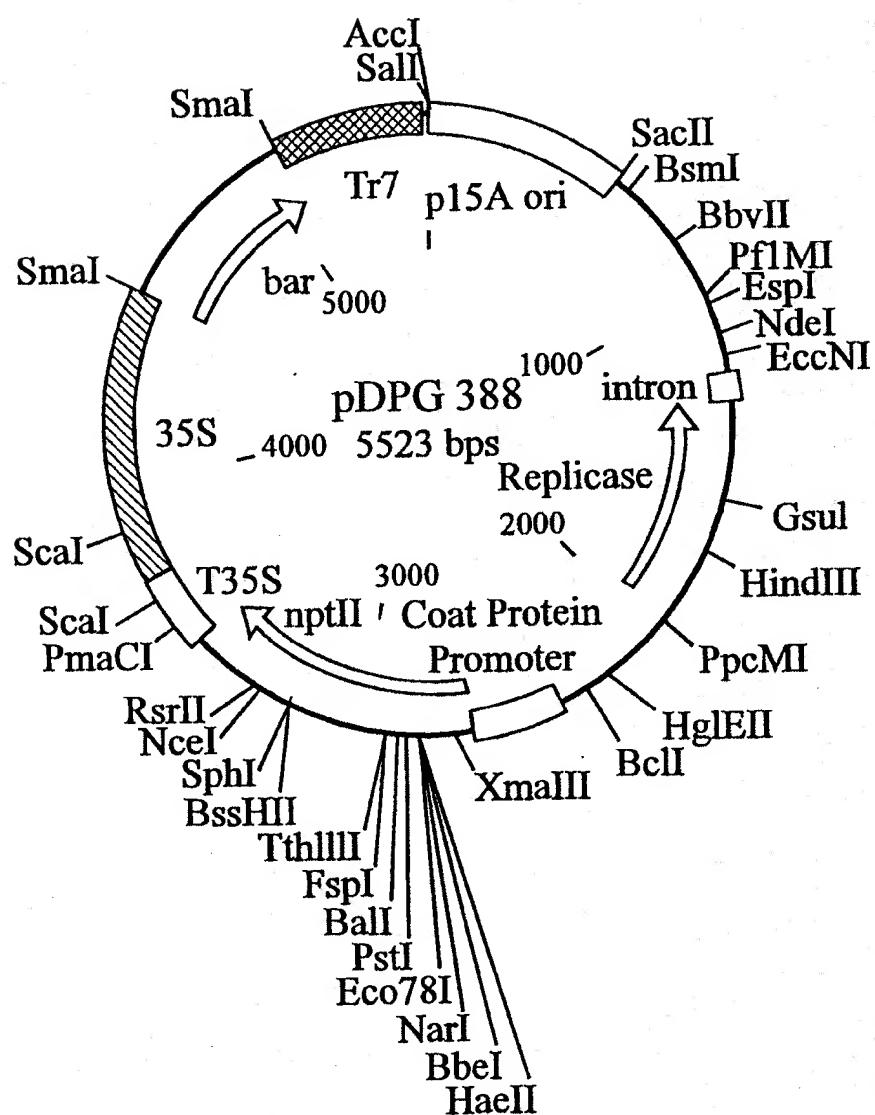


FIG. 1V

Replacement Sheet

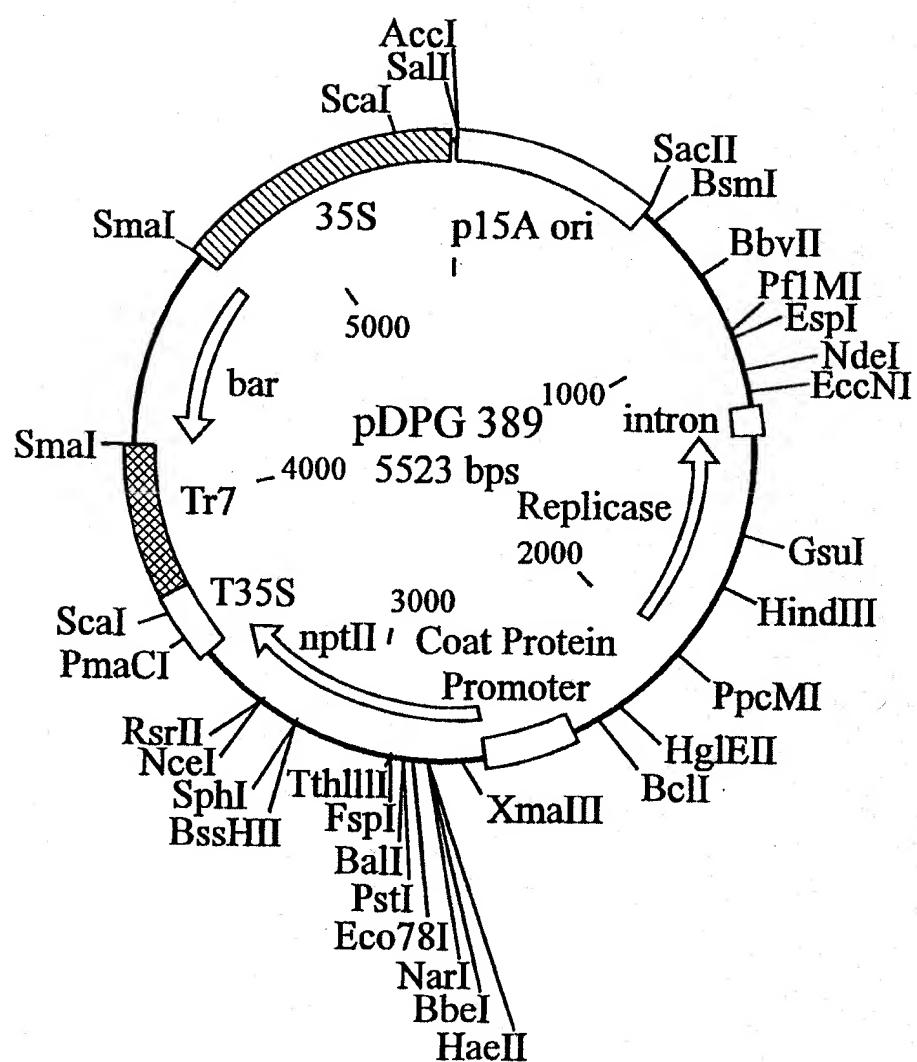
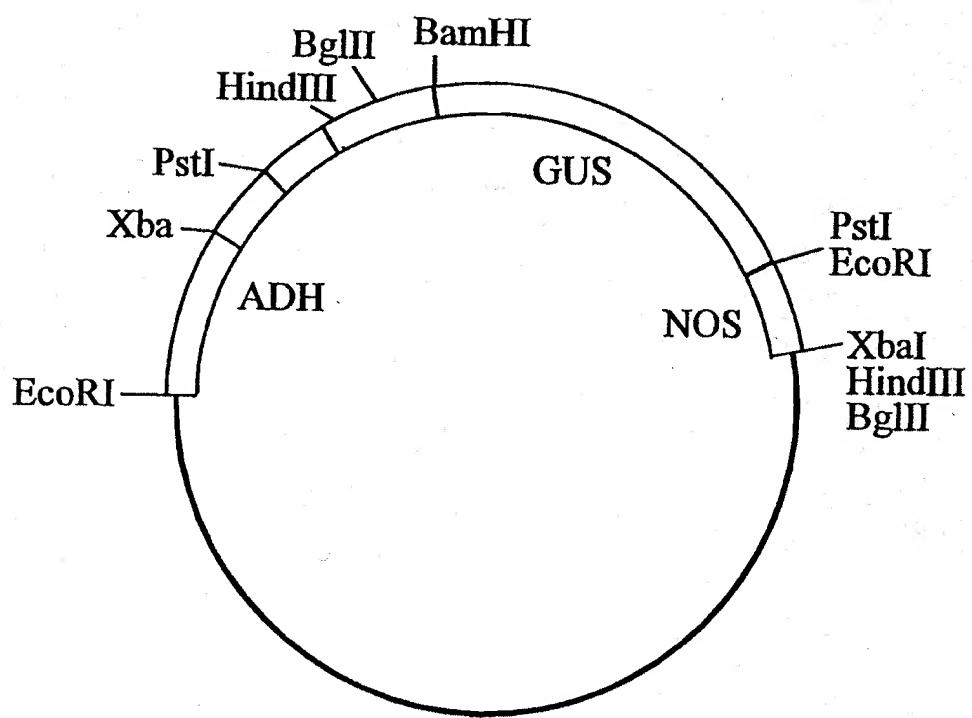


FIG. 1W

Replacement Sheet



**FIG. 1X**

Replacement Sheet

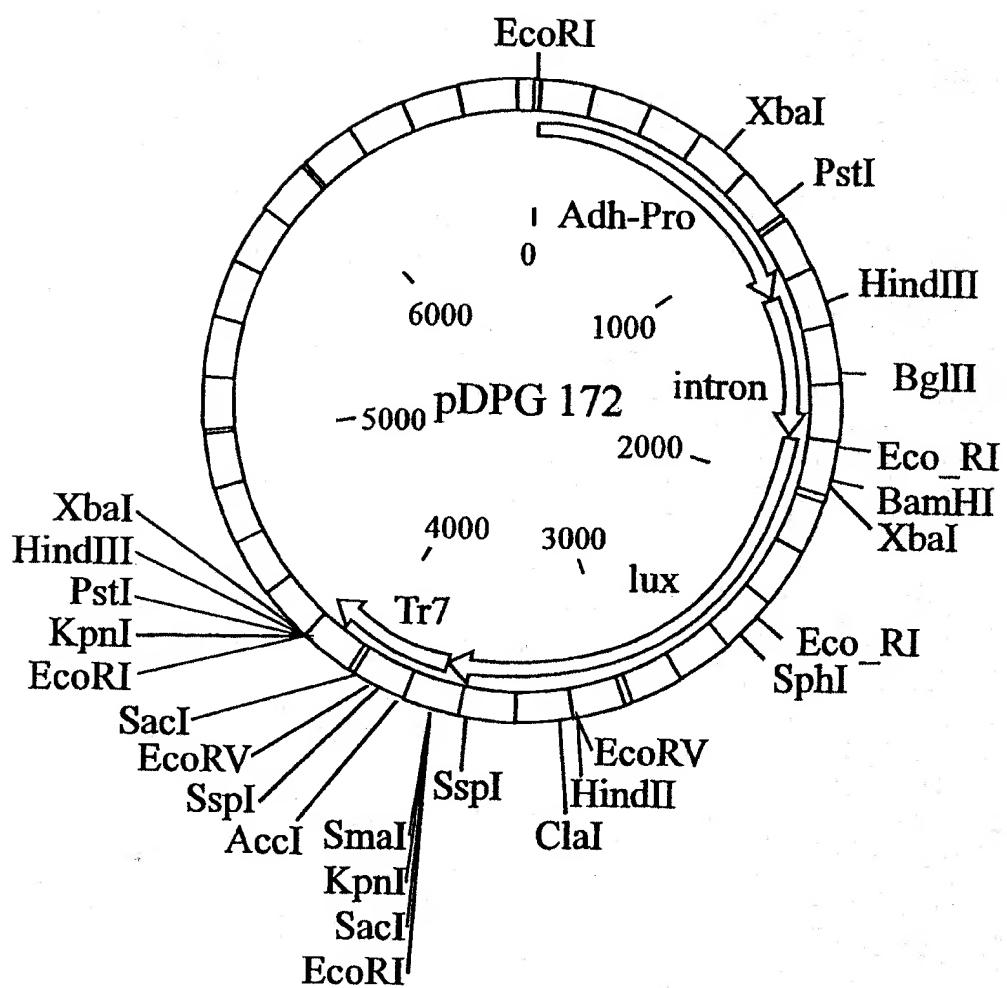


FIG. 1Y

Replacement Sheet

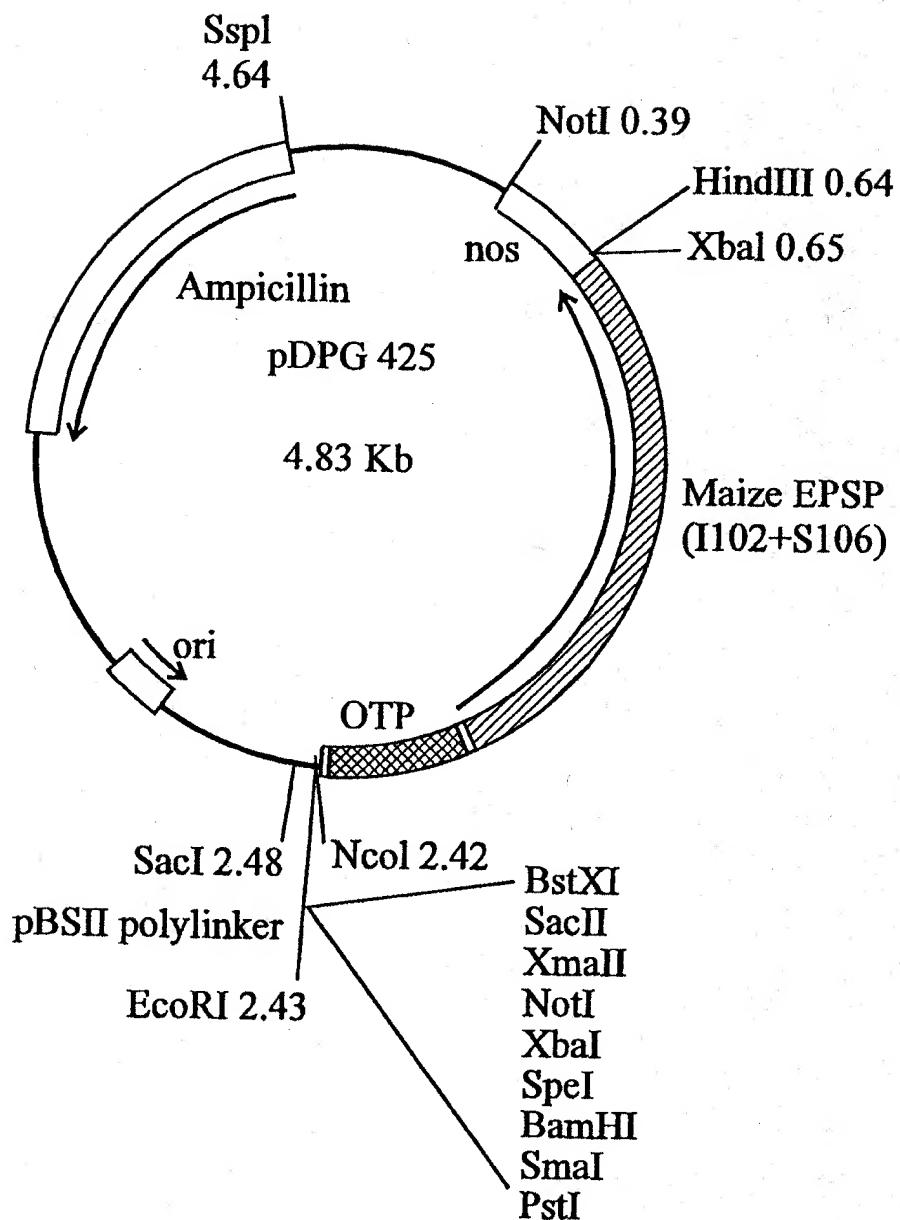
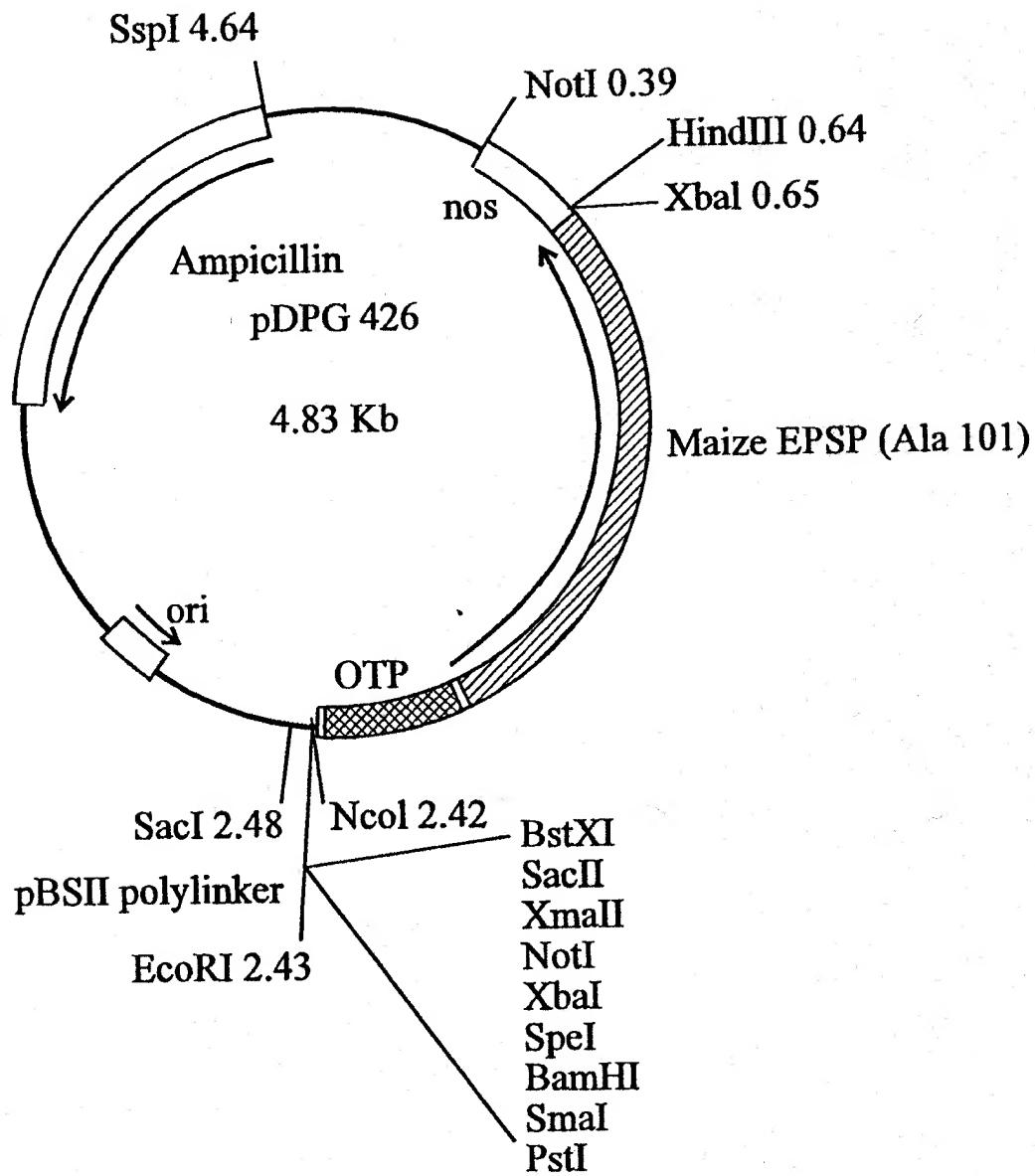


FIG. 1Z



**FIG. 1A-1**

Replacement Sheet

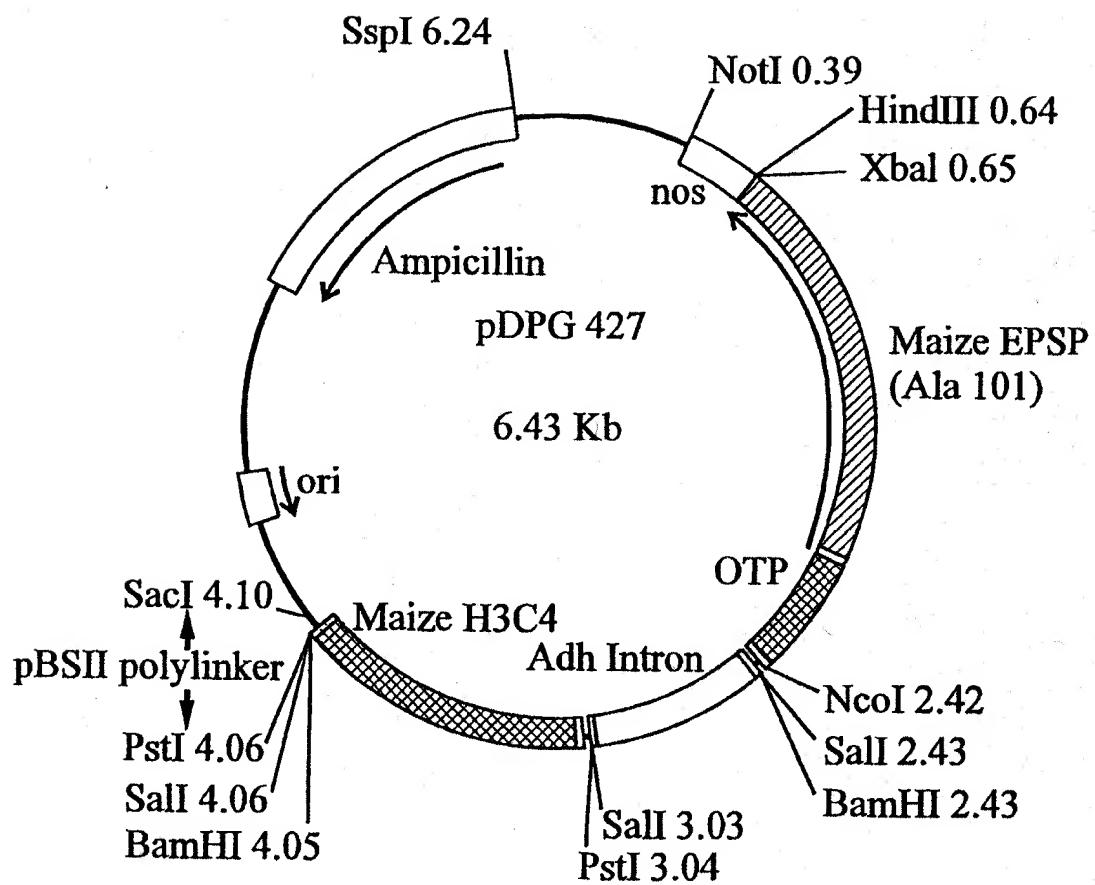


FIG. 1B-1

Replacement Sheet

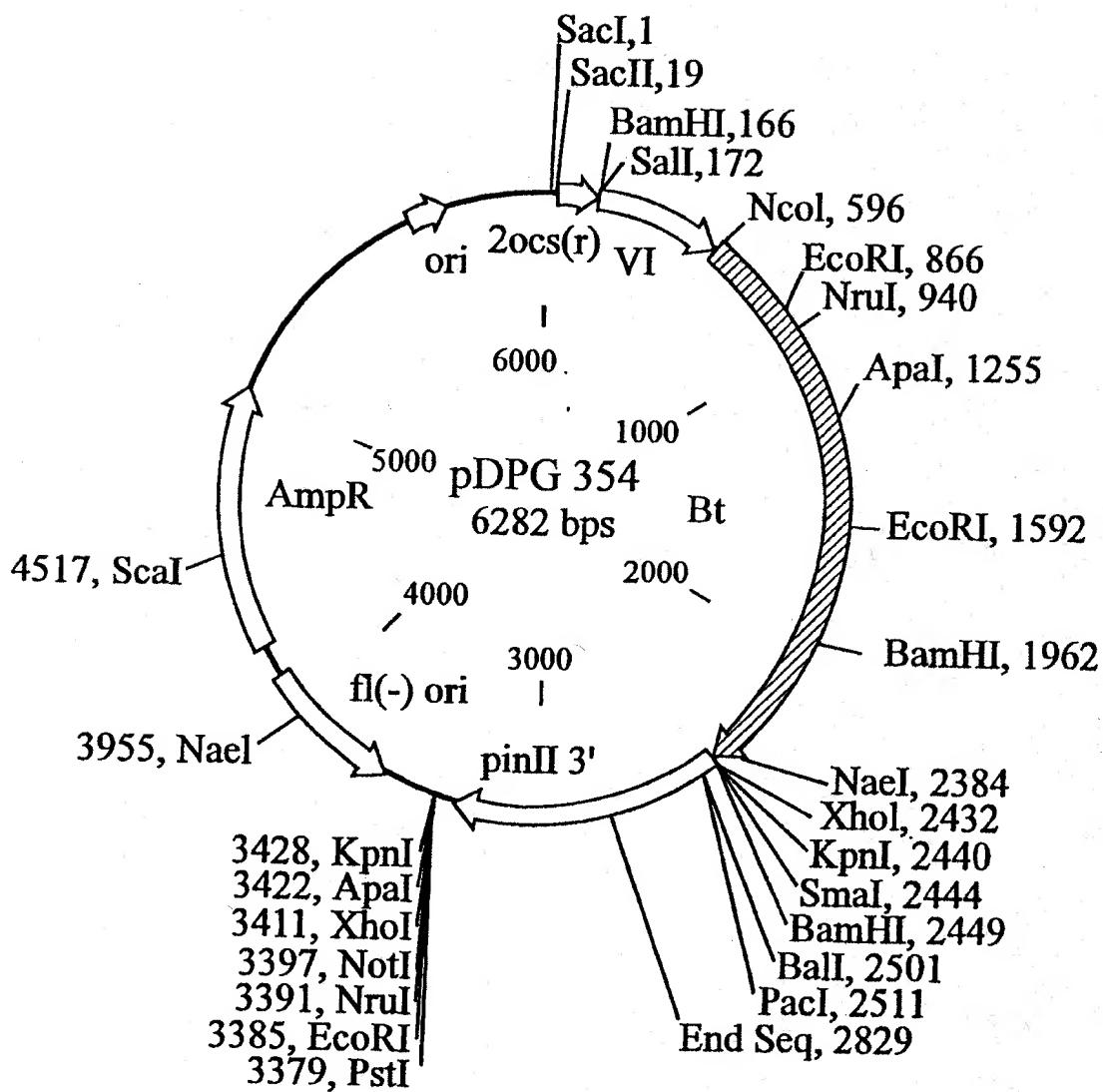


FIG. 1C-1

Replacement Sheet

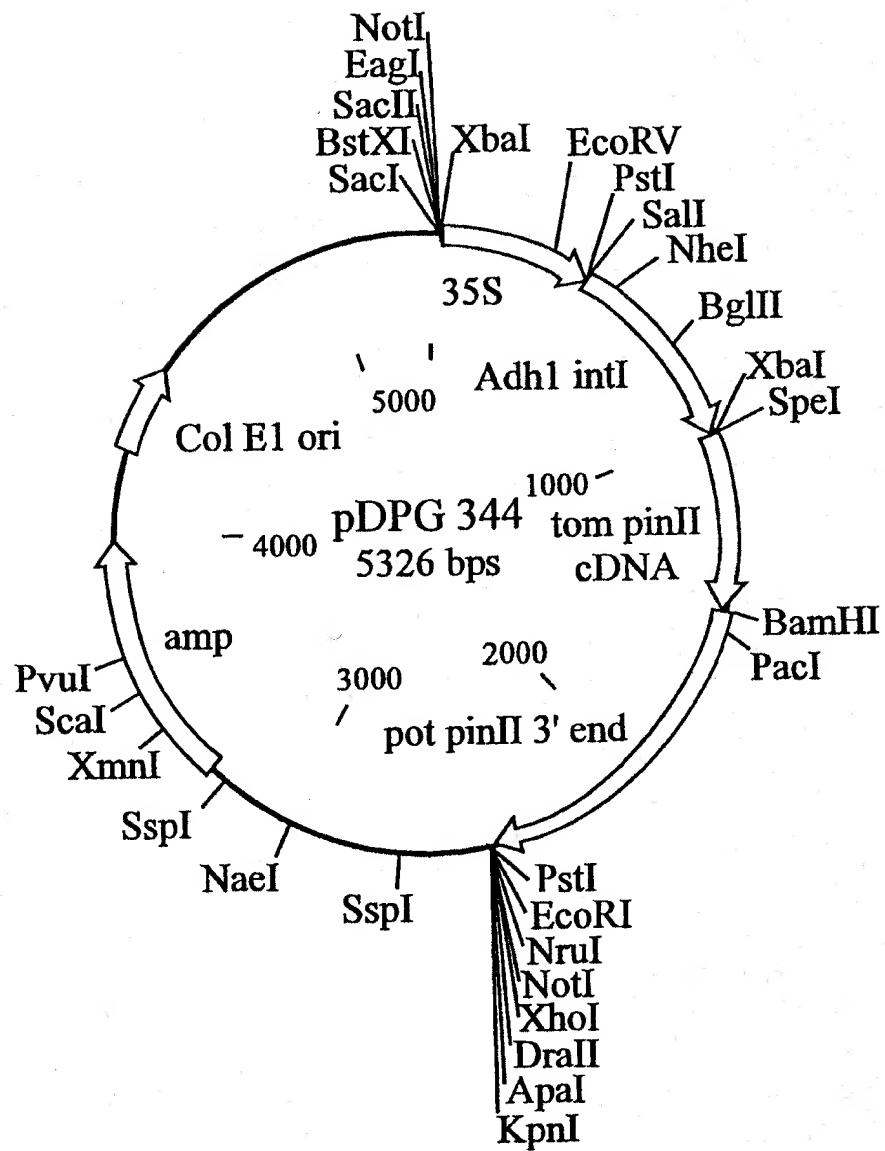
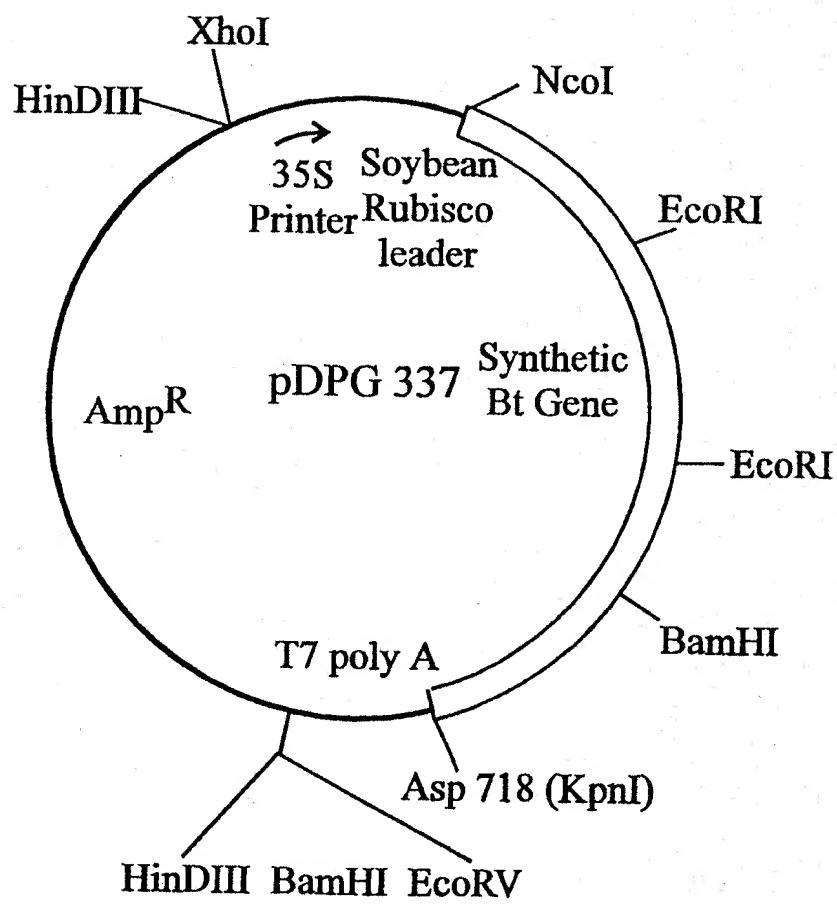
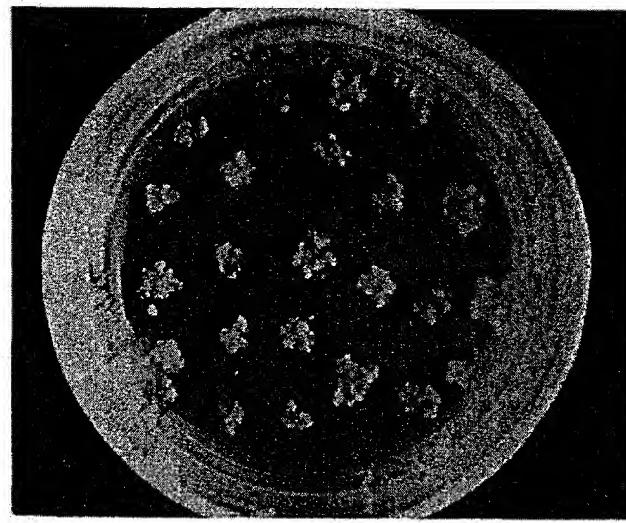


FIG. 1D-1

Replacement Sheet



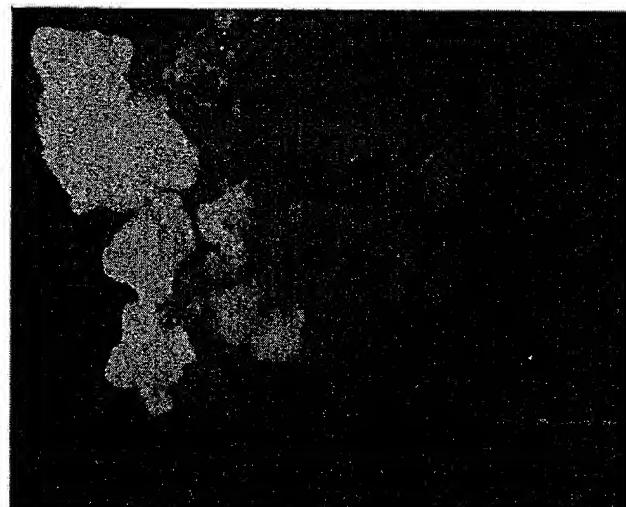
**FIG. 1E-1**



**FIG. 2A**



**FIG. 2B**



**FIG. 6**

## Replacement Sheet

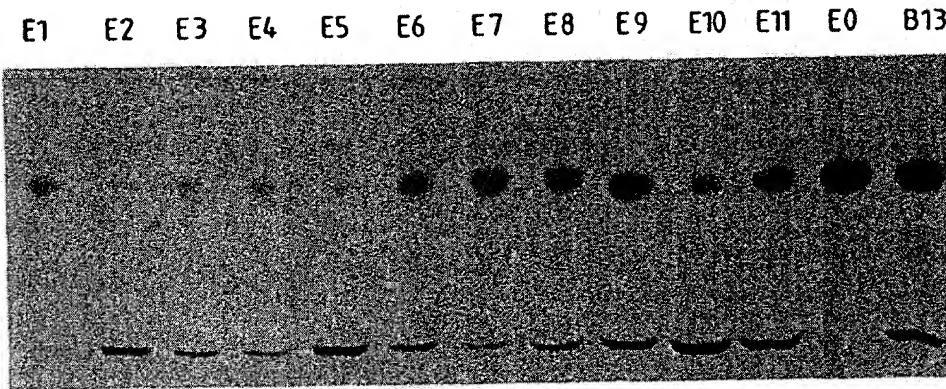


FIG. 3

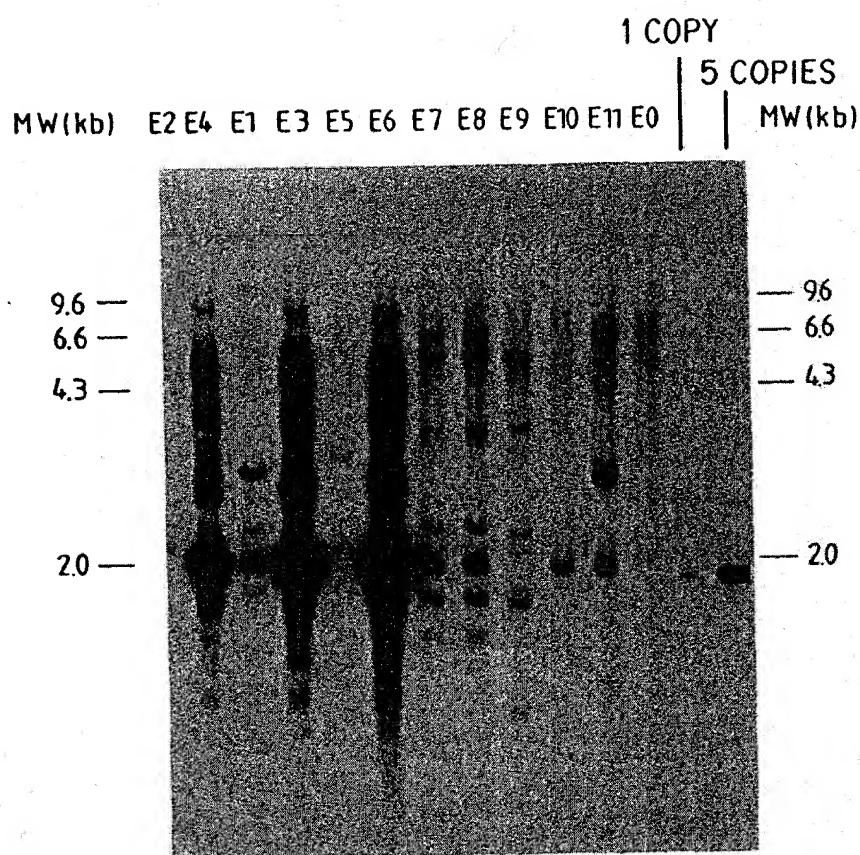


FIG. 4

Replacement Sheet

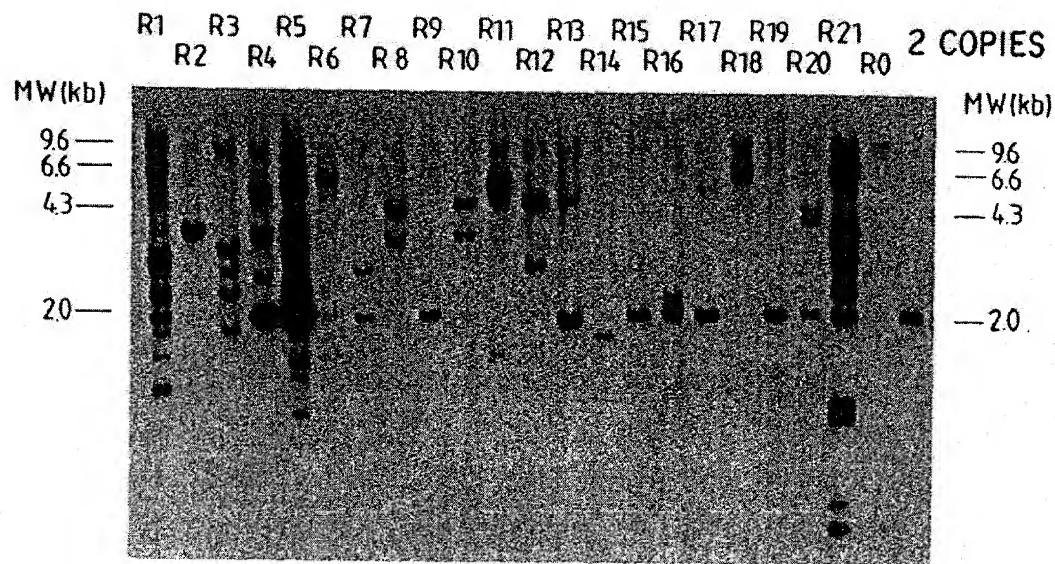


FIG. 5A

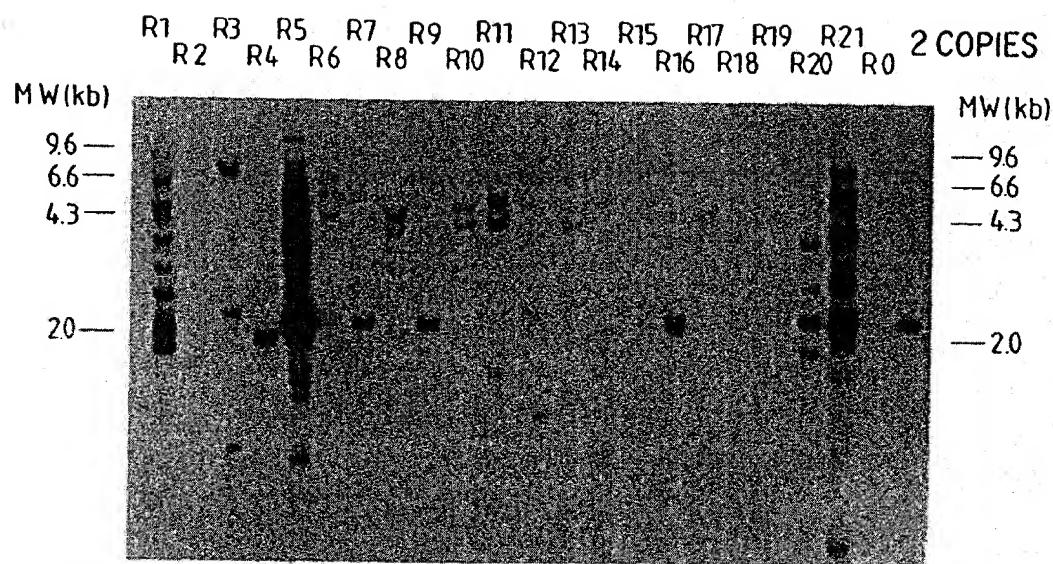
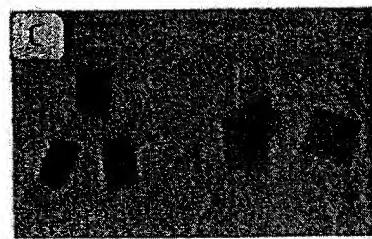
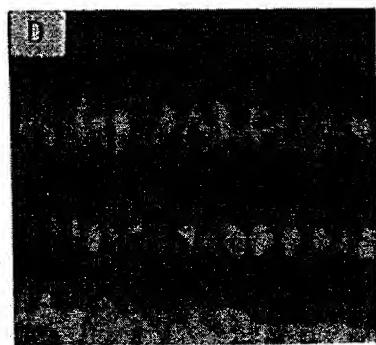


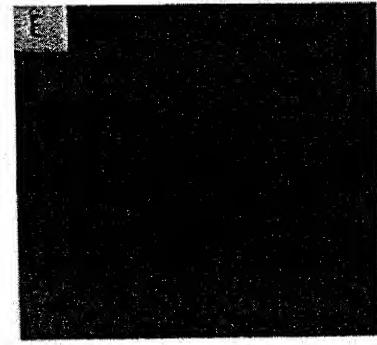
FIG. 5B



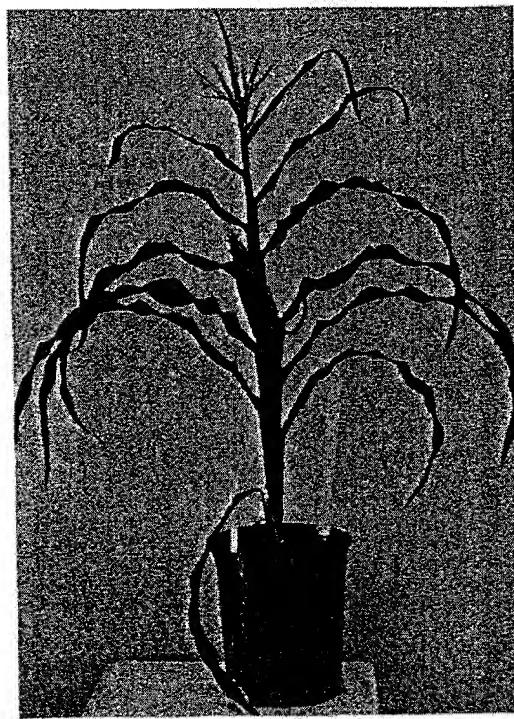
**FIG. 8C**



**FIG. 8D**



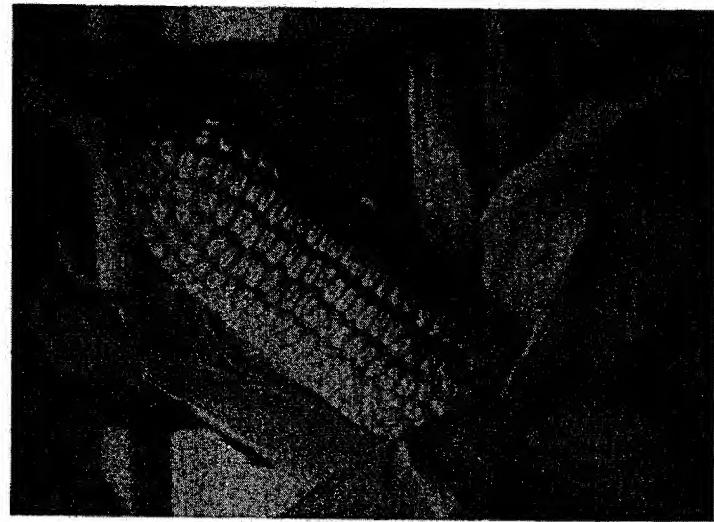
**FIG. 8E**



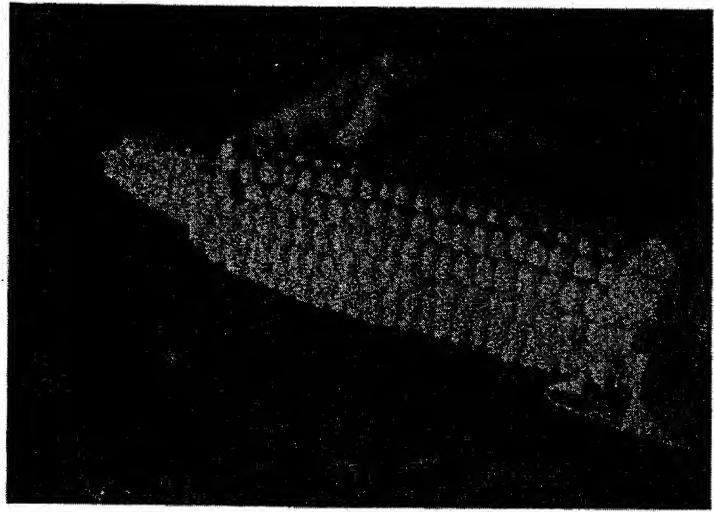
**FIG. 7A**



**FIG. 7B**

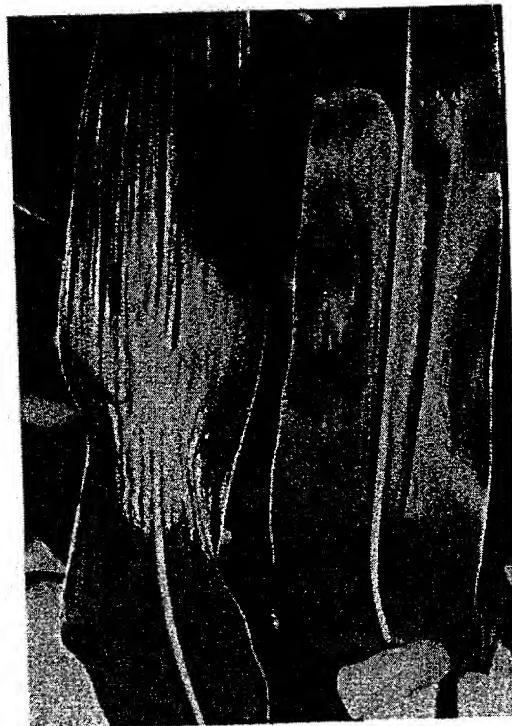


**FIG. 7D**

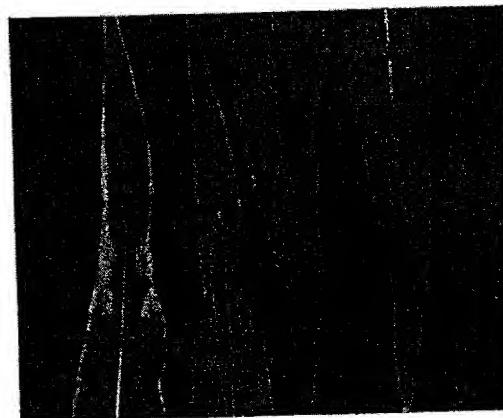


**FIG. 7C**

**Replacement Sheet**

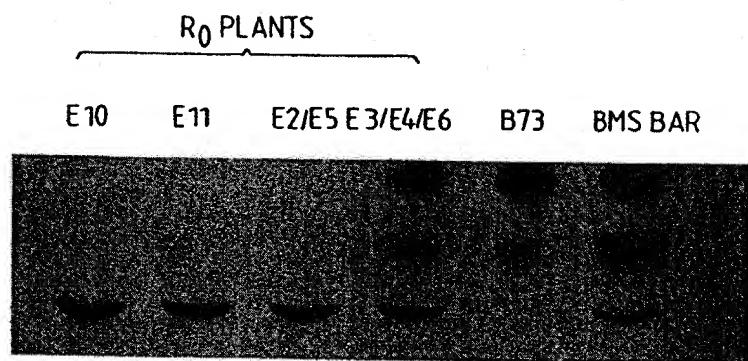


**FIG. 8A**

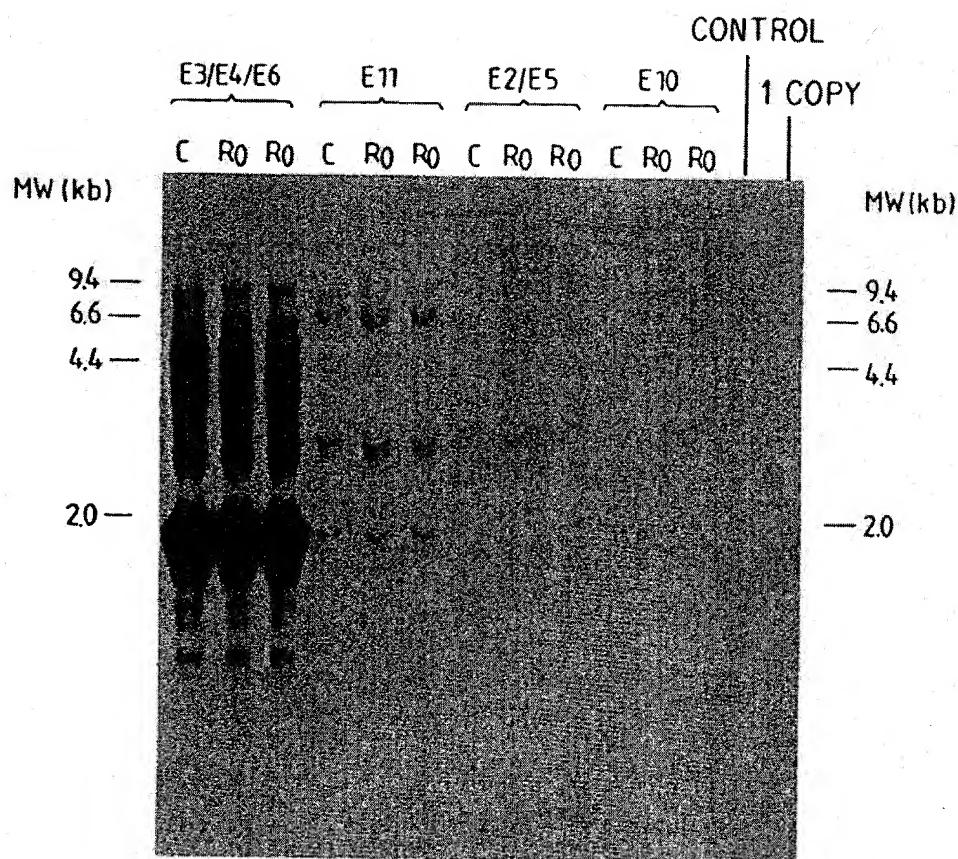


**FIG. 8B**

Replacement Sheet



**FIG. 9**



**FIG. 10**

Replacement Sheet

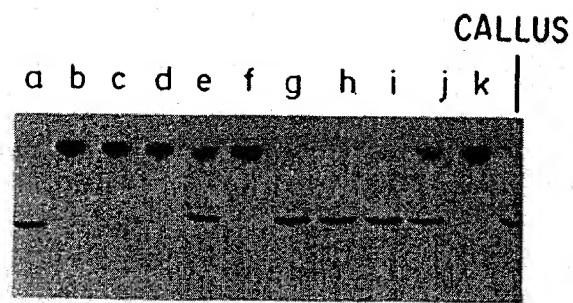


FIG. 11A

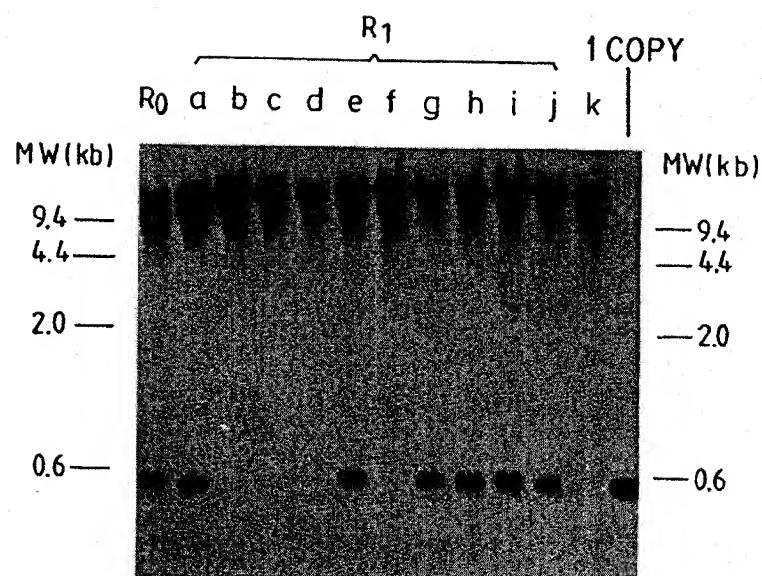


FIG. 11B

1/1 31/11 ATG GAT AAC AAT CCG AAC ATC AAT GAA TGC ATT CCT tac AAT TGC CTC AAC AGC CCT GAA  
 Met asp asn asn pro asn ile asn glu cys ile pro tyr asn cys ile pro ser asn pro glu  
 61/21 91/31 GTG GAA GTG CTG GGT GGC GAA CGC ATC GAA ACC GGT TAC ACC CCA ATC GAT ATT TCC CTG  
 val glu val leu gly gly glu arg ile glu thr gly tyr thr pro ile asp ile ser leu  
 121/41 151/51 TCC CTG ACC CAA TTT CTG CTG AGC GAA TTT GTG CCC GGT GCT GGC TTT GTG CTG GGC CTG  
 ser leu thr gln phe leu leu ser glu phe val pro gly ala gly phe val leu gly leu  
 181/61 211/71 GTG GAT ATC ATC TGG GGC ATT TTT GGT CCC TCC CAA TGG GAC GCC TTT CTG GTG CAA ATT  
 val asp ile ile trp gly ile phe gly pro ser gln trp asp ala phe leu val gln ile  
 241/81 271/91 GAA CAG CTG ATT AAC CAA CGC ATC GAA GAA TTC GCT AGG AAC CAA GCC ATT TCC CGC CTG  
 glu gln leu ile asn gln arg ile glu glu phe ala arg asn gln ala ile ser arg leu  
 301/101 331/111 GAA GGC CTG AGC AAT CTG TAC CAA ATT TAC GCC GAA TCC TTT CGC GAG TGG GAA GCC GAT  
 glu gly leu ser asn leu tyr gln ile tyr ala glu ser phe arg glu trp glu ala asp  
 361/121 391/131 CCT ACC AAT CCA GCC CTG CGC GAA GAG ATG CGC ATT CAA TTC AAT GAC ATG AAC AGC GCC  
 pro thr asn pro ala leu arg glu alu met arg ile gln phe asn asp met asn ser ala  
 421/141 451/151 CTG ACC GCT ATT CCT CTG TTT GCC GTG CAA ATT TAC CAA GTG CCT CTG CTG TCC GTG  
 leu thr thr ala ile pro leu phe ala val gln asn tyr gln val pro leu leu ser val  
 481/161 511/171 TAC GTG CAA GCT GCC AAT CTG CAT CTG TCC GTG CGC GAT GTG TTT GGC CAA  
 tyr val gln ala ala asn leu his leu ser val arg asp val ser val phe gly gln

FIG. 12A

541/181  
 AGG TGG GGC TTT GAT GCC GCC ACC ATC AAT GAT CTG ACC AGG CTG ATT  
 arg trp gly phe asp ala ala thr ile asn ser arg tyr asn asp leu thr arg leu ile  
 601/201  
 GGC AAC TAC ACG GAT TAC GCT GTG CGC TGG TAC AAT ACC GGC CTG GAA CGC GTG TGG GGC  
 gly asn tyr thr asp tyr ala val arg trp tyr asn thr gly leu glu arg val trp gly  
 661/221  
 CCA GAT TCC CGC GAT TGG GTG AGG TAC AAT CAA TTT CGC CGC GAA CTG ACC CTG ACC GTG  
 pro asp ser arg asp trp val arg cyr asn 91n phe arg arg glu leu thr leu thr val  
 721/241  
 CTC GAT ATC GTG GCT CTG TTC CCA AAT TAC GAT AGC CGC CGC TAC CCA ATT CGA ACC GTG  
 leu asp ile val ala leu phe pro asn tyr asp ser arg arg tyr pro ile arg thr val  
 781/261  
 TCC CAA CTG ACC CGC GAA ATT TAC ACC AAC CCA GTG CTG GAA AAT TTT GAT GGT AGC TTT  
 ser gln leu thr arg glu ile tyr thr asn pro val leu glu asn phe asp gly ser phe  
 841/281  
 CGC GGC TCC GCT CAG GGC ATC GAA CGC AGC ATT AGG AGC CCA CAT CTG ATG GAT ATC CTG  
 arg gly ser ala gln gly ile glu arg ser ile arg ser pro his leu met asp ile leu  
 901/301  
 AAC AGC ATC ACC ATC TAC ACC GAT GCT CAT AGG GGT TAC TAC TGG TCC GGC CAT CAA  
 asn ser ile thr ile tyr thr asp ala his arg gly tyr tyr trp ser gly his gln  
 961/321  
 ATC ATG GCT TCC CCT GTG GGC TTT TCC GGG CCA GAA TTC ACC TTT CCA CTG TAC GGC ACG  
 ile met ala ser pro val gly phe ser gly pro glu phe thr phe pro leu tyr gly thr  
 1021/341  
 ATG GCC AAT GCC GCT CCA CAA CGC ATT GTG GCT CAA CTC GGT CAG GGC GTG TAC CGC  
 met gly asn ala ala pro gln gln arg ile val ala gln leu gly gln gly val tyr arg

**FIG. 12B**

|          |   |
|----------|---|
| 1081/361 | ACC CTG TCC ACC CTC TAC CGC CCT TTT AAT ATC GGC ATC AAC AAC CAG CAA CTC             |
| 1141/381 | thr leu ser ser thr leu tyr arg arg pro phe asn ile gln gln leu                     |
| 1171/391 |   |
| 1201/401 | TCC GTG CTG GAC GGC ACC GAA TTT GCT TAC GGC ACC TCC TCC AAT CTG CCA TCC GCT GTA     |
| 1231/411 | ser val leu asp gly thr glu phe ala tyr gly thr ser ser asn leu pro ser ala val     |
| 1261/421 | TAC CGC AAG AGC GGC ACC GTG GAT TCC CTG GAT GAA ATC CCA CCA CAG AAT AAC AAC GTG     |
| 1291/431 | tyr arg lys ser gly thr val asp ser leu asp glu ile pro pro gln asn asn val         |
| 1321/441 | CCA CCT AGG CAA GGC TTT AGC CAT CGC CTG AGC CAT GTG TCC ATG TTT CGC TCC GGC TTT     |
| 1351/451 | pro pro arg gln gly phe ser his arg leu ser his val ser met phe arg ser gly phe     |
| 1381/461 | AGC AAT AGC AGC GTG AGC ATC ATC CGC GCT CCT ATG TTC TCC TGG ATC CAC CGC TCC GCT     |
| 1411/471 | ser asn ser ser val ser ile arg ala pro met phe ser trp ile his arg ser ala         |
| 1441/481 | GAG TTC AAC AAC ATC ATC CCG TCC TCC CAA ATC ACC CAA ATC CCG CTC ACC AAG TCC ACG     |
| 1471/491 | glu phe asn ile pro ser ser gln ile thr gln ile pro leu thr lys ser thr             |
| 1501/501 | AAC CTC GGC TCC GGC ACC TCC GTC AAG GGC CCG GGC TTC ACC GGC GAC ATC CTC             |
| 1531/511 | asn leu gly ser gly thr ser val val lys gly pro gly phe thr gly gly asp ile leu     |
| 1561/521 | CGC CGC ACG TCC CCG GGC CAG ATC TCC ACC CTC CGC GTC AAC ATC ACG GCT CCG CTG AGC     |
| 1591/531 | arg arg thr ser pro gly gln ile ser thr thr ala ser thr asn ile thr ala pro leu ser |

FIG. 12C

1621/541 1651/551  
ATC GAC GGC AGA CCG ATC AAC CAG GGC AAC TTC AGC GCG ACG ATG AGC TCC GGG TCC AAC  
ile asp gly arg pro ile asn gln gly asn phe ser ala thr met ser ser gly ser asn  
1681/561 1711/571  
CTC CAG TCC GGC TCC TTC CGC ACG GTC GGT TTC ACC ACG CCG TTC AAC TTC TCC AAC GGC  
leu gln ser gly ser phe arg thr val gly phe thr thr pro phe ser asn gly  
1741/581 1771/591  
TCC TCC GTC TTC ACG CTC TCC GCT CAC GTC AAC TCC GGC AAC GAG GTG TAC ATC GAC  
ser ser val phe thr leu ser ala his val phe asn ser gly asn glu val tyr ile asp  
1801/601 1831/611  
CGC ATC GAG TTC GTC CGG GCC GAG GTC ACC TTC GAG CTC GAG TAG GTA  
arg ile plu phe val pro ala glu val thr phe glu leu glu AMB val

FIG. 12D

1/1 31/11  
 ATG GAT AAC AAT CCG AAC ATC AAT GAA TGC ATT CCT tac AAT TGC CTC AGC AAC CCT GAA  
 Met asp asn pro asn ile asn glu cys ile pro tyr asn cys leu ser asn pro glu  
 61/21 91/31  
 GTG GAA GTG CTG GGT GGC GAA CGC ATC GAA ACC GGT TAC ACC CCA ATC GAT ATT TCC CTG  
 val glu val leu gly gly glu arg ile glu thr gly tyr thr pro ile asp ile ser leu  
 121/41 151/51  
 TCC CTG ACC CAA TTT CTG CTG AGC GAA TTT GTG CCC GGT GCT GGC TTT GTG CTG GGC CTG  
 ser leu thr gln phe leu ser glu phe val pro gly ala gly phe val leu gly leu  
 181/61 211/71  
 GTG GAT ATC ATC TGG GGC ATT TTT GGT CCC TCC CAA TGG GAC GCC TTT CTG GTG CAA ATT  
 val asp ile ile trp gly ile phe gly ile pro ser gln trp asp ala phe leu val gln ile  
 241/81 271/91  
 GAA CAG CTG ATT AAC CAA CGC ATC GAA GAA TTC GCT AGG AAC CAA GCC ATT TCC CGC CTG  
 glu gln leu ile asn gln arg ile glu glu phe ala arg asn gln ala ile ser arg leu  
 301/101  
 GAA GGC CTG AGC AAT CTG TAC CAA ATT TAC GCC GAA TCC TTT CGC GAG TGG GAA GCC GAT  
 glu gly leu ser asn leu tyr gln ile tyr ala glu ser phe arg glu trp glu ala asp  
 361/121 331/111  
 CCT ACC AAT CCA GCC CTG CGC GAA GAG ATG CGC ATT CAA TTC ATT GAC ATG AAC AGC GCC  
 pro thr asn pro ala leu arg glu alu met arg ile gln phe asn asp met asn ser ala  
 421/141 451/151  
 CTG ACC ACC GCT ATT CCT CTG TTT GCC GTG CAA ATT TAC CAA GTG CCT CTG CTG TCC GTG  
 leu thr thr ala ile pro leu phe ala val gln asn tyr gln val pro leu leu ser val  
 481/161 511/171  
 TAC GTG CAA GCT GCC AAT CTG CAT CTG TCC GTG CGC GAT GTG TCC GTG TTT GGC CAA  
 tyr val gln ala ala asn leu his leu ser val leu arg asp val ser val phe gly gln

**FIG. 13A**

FIG. 13B

1081/361 1111/371  
ACC CTG TCC ACC CTC TAC CGC CGC CCT TTT AAT ATC GGC ATC AAC AAC CAG CAA CTC  
thr leu ser ser thr leu tyr arg pro phe asn ile gly ile asn asn gln gln leu

1141/381 1171/391  
TCC GTG CTG GAC GGC ACC GAA TTT GCT TAC GGC ACC TCC TCC AAT CTG CCA TCC GCT GTA  
ser val leu asp gly thr glu phe ala tyr gly thr ser ser asn leu pro ser ala val

1201/401 1231/411  
TAC CGC AAG AGC GGC ACC GTG GAT TCC CTG GAT GAA ATC CCA CCA CAG AAT AAC AAC GTG  
tyr arg lys ser gly thr val asp ser leu asp glu ile pro pro gln asn asn asn val

1261/421 1291/431  
CCA CCT AGG CAA GGC TTT AGC CAT CGC CTG AGC CAT GTG TCC ATG TTT CGC TCC GGC TTT  
pro pro arg gln gly phe ser his arg leu ser his val ser met phe arg ser gly phe

1321/441 1351/451  
AGC AAT AGC AGC GTG AGC ATC ATC CGC GCT CCT ATG TTC TCC TGG ATC CAT CGC TCC GCT  
ser asn ser ser val ser ile ile arg ala pro met phe ser trp ile his arg ser ala

1381/461 1411/471  
GAG TTC AAC AAC ATC ATT GCC TCC GAT AGC ATC ACC CAA ATC CCT GCC GTG AAG GGC AAC  
glu phe asn asn ile ile ala ser asp ser ile thr gln ile pro ala val lys gly asn

1441/481 1471/491  
TTT CTG TTT AAT GGT TCC GTG ATT TCC GGC CCA GGC TTT ACC GGT GGC GAG CTG GTG CGC  
phe leu phe asn gly ser val ile ser gly pro gly phe thr gly gly asp leu val arg

1561/521 1531/511  
CCA TCC ACC TCC ACC CGC TAC CGC GTG CGC CGC TAC ATT GAA GTG CCA ATT CAC TTC  
pro ser thr ser thr arg tyr arg val arg arg gly tyr ile glu val pro ile his phe

1501/501 1591/531  
CTG AAT AGC AGC GGC AAT AAC ATT CAG AAT GTC CGC TAC GCT TCC GTG ACC CCA ATT CAC  
leu asn ser ser gly asn asn ile gln asn val arg tyr ala ser val thr pro ile his

**FIG. 13C**

|   |   |
|---|---|
| 1621/541  | CTC AAC GTT AAC TGG GGC AAT TCC TCC ATT TTT TCC AAT ACC GTG CCA GCT ACC GCT ACC |
| leu asn val asn trp gly asn ser ser ile phe ser asn thr val pro ala thr ala thr |   |
| 1681/561  | TCC CTG GAT AAT CTG CAA TCC AGC GAT TTT GGT TAC TTT GAA AGC GCC AAT GCT TTT ACC |
| ser leu asp asn leu gln ser ser asp phe 9ly tyr phe glu ser ala asn ala phe thr |   |
| 1741/581  | TCC TCC CTG GGT AAT ATC GTG GTG GGT CGC AAT TTT AGC GGC ACC GGC GGC GTG ATC ATC |
| ser ser leu gly asn ile val gly val arg asn phe ser gly thr ala gly val ile ile |   |
| 1801/601  | GAC CGC TTT GAA TTT ATT CCA GTG ACC GCC ACC CTC GAG TAG                         |
| asp arg phe glu phe ile pro val thr ale thr leu glu AMB                         |   |
| 1651/551  |   |
| 1711/571  |   |
| 1771/591  |   |
| 1831/611  |   |

FIG. 13D